Digitized by the Internet Archive
in 2009 with funding from
University of Toronto

http://www.archive.org/details/n12canadianjourn01cana

Copyright

DECEMBER, 1910

Registered

RA
421
C3
v. 1
no. 12
c. 3
GERSTS

CANADIAN JOURNAL OF PUBLIC HEALTH

The Public Health Journal of Canada

INCORPORATING THE CANADIAN THERAPEUTIST AND SANITARY ENGINEER

(OFFICIAL ORGAN OF THE CANADIAN PUBLIC HEALTH ASSOCIATION)

Vol. 1 | 43 Victoria St., TORONTO, CANADA | No. 12

Duncan, Flockhart & Co.'s CAPSULES

Antiferment (No. 330)

℞

Ol. Cajuput - - 2 minims
Chloroform - - 1 minim
Ol. Res. Capsici - $\frac{1}{10}$ grain

In each Capsule

¶ The Capsules constitute a most efficient remedy for Flatulence, etc., arising from septic fermentation of the gastric juices.

¶ Cajuput Oil has been long known to possess a very high value as an antiseptic carminative, but owing to its pungent flavor it is not at all suitable for prescribing in mixtures, etc. In capsule form this objection is entirely removed, and the physician has a most reliable and efficient remedy at his disposal in a very convenient form. The Chloroform acts as a mild sedative.

¶ Capsules Antiferment are best prescribed to be taken with or immediately after meals.

SAMPLES ON REQUEST

MAY BE ORDERED THROUGH ALL RETAIL DRUGGISTS

R. L. GIBSON,
38 Wellington Street West - TORONTO, ONT.

LIBRARY OCT 16 2001 UNIVERSITY OF TORONTO

THE PROPERTY OF THE ACADEMY OF MEDICINE TORONTO

See Contents, Page III.

Yearly Subscription, $2.00 - Single Copies, 20 cents

BACTERIOLOGICAL
LABORATORY EQUIPMENT

WRITE US FOR PRICES
AND CATALOGUES
—ON—

Microscopes
Microtomes
Haemacytometers
Haemometers

Autoclaves
Sterilizers
Incubators
Centrifuges
Chemical Glassware

(Latest Publications on Laboratory Technique)

The J. F. HARTZ CO. Limited

PHYSICIANS' SUPPLIES

406-408 Yonge St. - TORONTO

S.E.C.	Blaud Plain	
No. 50	Blaud Mass.....	= 5 grs.
No. 51	,, ,, ,,	= 10 grs.
No. 52	,, ,, ,,	= 15 grs.
	Blaud and Arsenic	
No. 53	Blaud	= 5 grs.
	Arsenical Solution	= 2 mins.
No 54	Blaud	= 10 grs.
	Arsenical solution	= 2 mins.
No. 55	Blaud	= 15 grs.
	Arsenical Solution	= 2 mins

S.E.C.	Blaud Aloes and Nux Vomita	
No. 56	Blaud	= 5 grs.
	Ext. Aloes	1 gr.
	Ext. Nux Vomica	¼ gr.
No. 57	Blaud	= 10 gr.
	Ext. Aloes	1 gr.
	Ext. Nux Vomica	¼ gr.
No. 58	Blaud	= 15 grs.
	Ext. Aloes	1 gr.
	Ex. Nux Vomica	¼ gr.
	Blaud Arsenic and Nux Vomita	
No. 59	Blaud	= 5 grs.
	Arsenical solution	1 min.
	Ext. Nux Vomica	¼ gr.
No. 60	Blaud	= 10 grs.
	Arsenical solution	= 2 mins
	Ext. Nux Vomica	¼ gr.

Frosst's Perfected Blaud Capsules

True Ferrous Carbonate in ethical packages containing 100 capsules each.

The full line of Frosst's Soluble Elastic Capsules, embracing many effective formulae, found on pages 57 to 62 of Frosst's regular price list, will be of interest to physicians.

Charles E. Frosst & Co.
MONTREAL, CANADA

Art Tapestry for Wall and Ceiling Decoration

¶ One of our methods of decoration is through **Tapestry Painting** of which we are prepared to furnish the classical, allegorical, the genre, the historical and the picturesque.

¶ Schemes of decoration are sometimes devised to carry out specific ideas, such as **Sleeping Beauty Boudoir,** an **Apollo Drawing Room,** a **Mother Hubbard Nursery,** a **Helen of Troy Parlor,** an **Antiparos Grotto Room,** Etc.

¶ We submit designs and give estimates on all kinds of Draperies, Upholstery, Wallpapers, Painting, etc.

¶ **We have all the Newest Designs and Materials for Curtains, Draperies, Window Blinds, etc.**

SUMMERS & WIGGINS

471-473 Spadina Cres., - - - - TORONTO, ONT.
(Opposite Knox College)

TELEPHONE, ADELAIDE 107

Canadian Public Health Association

Publicity Office, 43 Victoria Street, Toronto, Canada

EXECUTIVE COUNCIL

P. H. Bryce, M.D., Ottawa.
Chas. A. Hodgetts, M.D. Ottawa.
F. Montizambert, M.D., Ottawa.
R. W. Simpson, M.D., Winnipeg.
Albert E. Webster, D.D.S., Toronto.
L. E. W. Irving, M.D. Edmonton.
J. W. S. McCullough, M.D., Toronto.
M. M. Seymour, M.D., Regina.
E. B. Ecklin, M.D., Ottawa.
C. J. Fagan, M.D., Victoria.
E. P. Lachapelle, M.D. Montreal.
T. Aird Murray, C.E., Toronto.
A. P. Reid, M.D., Halifax.
E. M. Wood, Esq., Winnipeg.
C. H. Higgins D.V.S., Ottawa.
E. Bayard Fisher, M.D., Fredricton.
R. W. Bruce Smith, M.D., Toronto.
H. D. Johnson, M.D., Charlottetown.
Chas. J. C. O. Hastings, M.D., Toronto.
A. J. Harrington, M.D., Toronto.

1910-1911

Sir James A. Grant, Hon. President, Ottawa.
T. A. Starkey, M.B., D.P.H., President, Montreal.
Major Lorne Drum, M. D., D.P.H., Gen. Secretary, Ottawa.
George D. Porter, M.B., Treasurer, Toronto,

OBJECT AND MEMBERSHIP

(EXTRACT FROM CONSTITUTION)

Article 2, Section 1.

The object of the Canadian Public Health Association is the development and diffusion of the knowledge of sanitation in all its branches and for this purpose it seeks the co-operation of all professions, trades, occupations, public bodies and organizations participating in any way in the promotion or practice of Public Health work.

Article 3. Section 1.

Members of this Association may be either Active or Associate.

Section 4.

Active membership gives the right to hold office. It may be accorded only to those who have been for a period of a least one year practically engaged in technical branches of public hygiene or have been for a period of one year on the executive or technical staffs of federal, provincial or municipal departments dealing with Public Health.

Section 5.

Associate membership gives the right to vote on all questions, but not to hold office. It may be accorded to anyone not eligible for Active membership.

Section 6.

All members both Active and Associate shall receive the transactions and Official Journal of the Association.

AN INVITATION

The Officers and Members of the Canadian Public Health Association invite you to join them in membership, to co-operate in their reviews and study of Social Problems and assist in that thoughtful publicity which is essential to progress in all departments of Public Health.

Cut out the following card on dotted border, complete and mail as addressed.

Approved

Received by

Number

Entered

Date_____ 19

MEMBERSHIP LIST
Canadian Public Health Association

Class _____
Active or Associate

Name (in full) _____

Address _____

Profession or Occupation _____

Professional or other Qualification (if any) _____

Please submit my name for election as an Active / Associate Member of the Canadian Public Health Association; *dues $_____, which will entitle
Active, $3. Associate $2.
me on election to the privileges of the Association including Subscription to The Public Health Journal.

TO THE TREASURER,
Canadian Public Health Assn.
43 Victoria st. Toronto.

_____
(Signature of Applicant)

*Make Cheques, etc., payable to the "Treasurer, Canadian Public Health Association"

When communicating with advertisers please mention The Public Health Journal. Applicants for advertising in this Journal show reliability before being allotted space.

Duncan Anderson, M.D. * —Publishing Committee— L. M. Coulter, M.D.

The
Public Health Journal
of Canada

INCORPORATING THE CANADIAN THERAPEUTIST AND SANITARY ENGINEER

[OFFICIAL ORGAN OF THE CANADIAN PUBLIC HEALTH ASSOCIATION]

CONTENTS FOR DECEMBER, 1910.

Page

FRONTISPIECE
Officers: Canadian Public Health Association, 1910-1911.

SPECIAL ARTICLES
Avoiding a Drug Habit, by Jennie Gray Wildman, M.D., C.M..... 573
Sewage Treatment Within Reason, by Arthur Bowes, Assoc. M. Inst. C.E. 574
Purifying Drinking Water, by G. G. Nasmith, M.A., Ph.D., Chemist of the Ontario Board of Health, and R. R. Graham, M.B., Assistant Chemist..... 576
Air and Ventilation in Modern Warships, by Surgeon L. F. Cope, R.N. 578
Anterior Poliomyelitis, by Frank Moore, M.B. 582
School Children and Public Health, by C. E. Terry, M.D..... 583

WORLD VIEWS..... 588
The Health Caravan.
Awakening the Mandarin.
The Ant in a New Character.
French Scholars' Health Record.
The Cat and the Bubonic Plague.
The Physician's Future.
Smokeless Factories.
Whitewashing the Quack.
Sanitation in England.
A Social Peril.
Protecting Public Health.
Teaching Soldiers Hygiene.
A Department of Health.
Medical Inspection and its Consequences.
Conserving Human Health.
Hygiene and Nutrition.
Sanitary Money.
Packing Houses.
Hospital Construction.

EDITORIAL..... 602
Co-operation in Public Health.
Tolstoi.
"Six-Hundred-and-Six."
Inter Alia.

OPEN MAIL..... 614
A Corset Advocate.
Conspiracy of Silence.
Street Car Ventilation.
Duties of Towns.

LIBRARY, LABORATORY & CLINIC. 610
Public School Hygiene.
Sleeping Car Air Analysis.
How to Take Care of the Baby.
Lumsden's Pamphlet.
Woman Health Visitors.
Sleeping Sickness.

MEETINGS AND REPORTS..... 617

POSTSCRIPT

THE PUBLIC HEALTH JOURNAL OF CANADA (Incorporating The Canadian Therapeutist and Sanitary Engineer), Official Organ of the Canadian Public Health Association, is published on THE FIRST OF EACH MONTH in the interest of general prophylaxis and social well-being.

TERMS: Membership fee (see page ii) in the Canadian Public Health Association includes subscription to the JOURNAL; to non-members Yearly Subscription, $2.00; Single Copies, 20 cents.

POSTAGE is prepaid by the Journal for Subscribers on above terms.

PAYMENTS should be made, by EXPRESS OR POSTAL MONEY ORDER OR CHEQUE MARKED AT PAR, to "THE PUBLIC HEALTH JOURNAL OF CANADA," 43 Victoria Street, Toronto, Canada, and not to individuals.

LETTERS will receive prompt consideration in the order of their arrival; those for the Editorial Department should be written only on one side of paper and have included with private addresses the pseudonyms, if desired, over which they may be published.

SPECIAL CONTRIBUTIONS should be illustrated by photographs or drawings and accompanied by postage for return, if not used.

ADVERTISING RATES will be furnished on application.

☞ *ADDRESS in every case, "THE PUBLIC HEALTH JOURNAL OF CANADA," 43 Victoria Street, Toronto, Canada; adding name of department if it is desired to reach as, "Editorial" or "Business."

ENTERED according to act of Parliament of Canada, in the year of one thousand nine hundred and ten, at the Department of Agriculture. All rights reserved.

When communicating with advertisers please mention The Public Health Journal. Applicants for advertising in this Journal show reliability before being allotted space.

SUGAR-COATED COMPRESSED TABLETS

Chromium Sulphate Compound

R Chromium Sulphate	2 grs.
Zinc Phosphide	1-10 gr.
Powd. Ext. Nux Vomica	1-8 gr.
" " Cannab. Ind.	1-10 gr.
Aveuine	1-200 gr.
Pulv. Cantharides	1-12 gr.

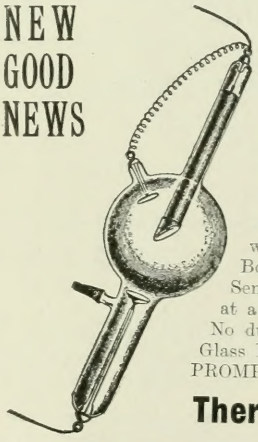
The curative properties of Chromium Sulphate are being recognized very largely by the Medical profession. It is replacing Damiana to a very great extent. We have added the above tablet to our list. Send us a trial order.

INGRAM & BELL, Limited

Importers and Manufacturers of Pharmaceuticals, Surgical Instruments, Physicians and Hospital Supplies.

420 YONGE STREET - - TORONTO, CANADA

NEW GOOD NEWS



TO

Every X-Ray Operator and anyone using High Grade Glass apparatus in the Dominion of Canada. We now have a complete plant for the manufacture and repair of all or any High Grade Glass apparatus, X-ray or High Frequency Tubes. We solicit your enquiry. No need to discard an X-Ray Tube because it will not give results. Our German experts are experienced in all kinds of Glass or X-Ray apparatus work. Canadian Universities, Surgeons, Chemists, Board of Health Departments, we ask your enquiry. Send us any broken Glass apparatus, we can repair it at a fraction of the first cost or duplicate it promptly. No duty. No waiting. New factory. Expert German Glass Blowers. Best Glass. Our Motto: QUALITY—PROMPTNESS—ACCURACY.

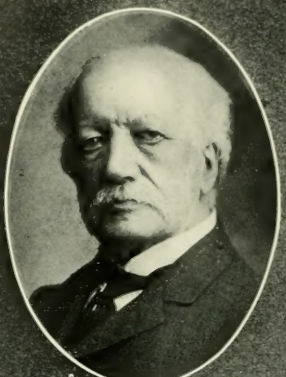
Thermos Bottle Co. Ltd., 12-14 Sheppard St. TORONTO

X Ray and Glass Apparatus Department.

When communicating with advertisers please mention The Public Health Journal. Applicants for advertising in this Journal show reliability before being allotted space.

The foes that the city's food encounter are of two classes, the natural and the unnatural, the forces of nature and those of greedy or ignorant men. Both types of evil can be avoided by the community, if it will raise against them certain well recognized guards.

—*Hollis Godfrey,*



SIR JAMES A. GRANT
HON. PRESIDENT

T. A. STARKEY M.B., D.P.H.
PRESIDENT

MAJOR LORNE DRUM M.D., D.P.H.
GENERAL SECRETARY

GEORGE D. PORTER M.B.
TREASURER

OFFICERS: CANADIAN PUBLIC HEALTH ASSOCIATION 1910-11

The
Public Health Journal of Canada
INCORPORATING THE CANADIAN THERAPEUTIST AND SANITARY ENGINEER
(OFFICIAL ORGAN OF THE CANADIAN PUBLIC HEALTH ASSOCIATION)

VOL. I DECEMBER, 1910 No. 12

Special Articles

AVOIDING A DRUG HABIT

By JENNIE GRAY WILDMAN, M.D., C.M.

It is a matter of wonderment and regret at this stage of development of mankind that the sale of all kinds of aperient and purgative medicines is so great.

That enlightenment on this, as well as on other questions of hygienic living, is becoming more general, is encouraging, but, that there is yet much to be desired, is evidenced by the great number of advertisements of medicines for this purpose in our daily papers and journals, and also by the quantity of this class of drugs prescribed by physicians and sold by druggists.

The question is why this prevailing condition apart from disease.

I just mean to take up one of the chief reasons, one which is certainly very largely avoidable .

The pregnant woman has been trained for generations to fear any failure of the bowel to relieve itself and rightly so. But here begins the trouble. As far as I can judge from the experience of patients and from what I have seen written on the subject, laxative or purgative medicines are the almost universal early resort for relief of this condition. After the stimulation of the bowel to action there is the resulting inaction. This with that fixed idea working overtime in the brain of the patient. "The bowels must move at any cost and aside from any other consideration," suggests a second dose, a third, etc., and the habit is established; a habit which means to the child in utero, a training in constipation—a training in drug taking.

Follow this up to the second or third day after delivery and the inevitable bottle of castor oil appears for both mother and child, which still farther emphasizes the condition and fastens the drug shackles a little more securely, so that they will almost surely last through the time of lactation and perhaps throughout the life of both. The infant's post-natal as well as its pre-natal training is thus made a powerful factor in fixing the constipated habit upon it.

What is the remedy? Instead of giving drugs the patient should be instructed, that the bowels must move, but that drugs for this purpose are usually neither necessary nor desirable. That free use of water, fruit, fresh vegetables, etc., with sufficient exercise and the insistence of the regular habit, of an evacuation each day, almost

always will make and keep things right.

She should be told how important these matters are to the child, and that by taking the first trouble she will save both herself and the child much afterwards.

The same avoidance of drugs and the use of hygienic measures instead should be followed after delivery, and during lactation just as far as possible.

The rugby player after a knockout blow is allowed five minutes to recover. How often is the fact considered that the bowel demands at least one or two days to recover from the blow of a purgative dose, before it is able to take up its usual duties. If this one fact were remembered it would go far toward preventing the repitition of doses of laxative medicine, and therefore in preventing the formation of the habit of constipation.

SEWAGE TREATMENT WITHIN REASON

By ARTHUR BOWES, Assoc. M.Inst. C.E.

By those who have followed for the last twenty or thirty years the melancholy history of sewage treatment, the conclusions and recommendations embodied in the Fifth Report of the Royal Commission on Sewage will be welcomed as a hopeful sign. They seem to indicate that the duties and possibilities of Local Authorities are being viewed in a more reasonable manner than has previously been the case. It will be remembered that only ten years ago no scheme of sewage treatment would secure the approval of the Local Government Board unless it provided for turning the effluent over a specified area of land, while at the same time County Councils and River Boards had their standards of perfection which must be attained by the luckless authorities concerned, quite irrespective of the quality of the sewage which had to be dealt with, the nature of the stream into which the effluent had to be discharged, or the quality of the land in the neighbourhood of the sewage works. No guidance was offered as to the methods which would satisfy the powers in authority. The position assumed was: "Here is the standard we require; you must attain it as best you can." In the legal conflicts which ensued from non-compliance with these requirements it was always the smaller authorities which suffered, for what effect could be made on a large and wealthy corporation by an injunction or the infliction of a small fine? Consequently we were presented with the incongruity of two or three harassed communities saddling themselves with the burden of expensive works and doing their best to purify their sewage, while higher up the stream into which their effluent was discharged some immense town continued to discharge its pestilential filth in such quantities as to nullify the good effects of their little efforts.

Even the knowledge of purification methods was so little advanced that an authority which ten years ago sought the approval of the Local Government Board to a scheme based on the then comparatively new bacterial treatment would probably be told that it could only be installed "as an experiment" on the responsibility of the local authority.

The Fifth Report contains not only a large amount of definite and useful information as to what has been done at the various sewage works of the country, but also gives plain expression to the opinions of the Commission on various details in such a manner as to be really helpful to those who are anxious to meet the requirements of modern sanitation. And, above all, there is displayed a tendency to recognise the difficulties of the task and to take a more reasonable view of the requirements which should be asked for. The rigid ruling as to land treatment was abandoned in the First Report, so long ago as 1901. The Fifth Report goes much further in its rea-

A paper read before the British Institute of Municipal Engineers at the Second Annual General Meeting held at Eastbourne, England, October, 1910.

sonableness when it says that the main question to be considered is "what degree of purification is required under the circumstances of the town and of the river or stream into which its liquid refuse is to be discharged." In the matter of the treatment of storm water, too, the views expressed are less stringent than formerly.

It is gratifying to find that local conditions are at last to receive the consideration they deserve. Under the existing state of things a town may turn its effluent into a stream so notorious for its filthy condition as to be declared by a County Analyst to be a stream which it is impossible to pollute. The situation of the town may be such that while it receives a stream already highly polluted there are no other towns nor villages on the lower reaches of the stream. To ask such a town to purify its sewage to a high degree is to ask for something which is a sheer waste of money. The average town councillor of a town so situated will very properly ask why an expensive system of purification should be required when not a single human being will be benefited by it. Morally, of course, there is a pleasure in well-doing, and it may be said that virtue is its own reward, but—is there any virtue in spending money to no useful purpose?

The recommendation of the Royal Commission that the circumstances of the town and river should be taken into account is a wise and just one, and will no doubt lead to a more considerate treatment of Authorities placed in the unfortunate position described. The national work of improving the condition of our streams and rivers must still, however, be carried on, though the methods of procedure may be modified by the suggestions of the Commission. Seeing that the principle is now recognised of taking into account the condition of the stream, might it not be desirable to make such condition the starting point from which to determine the amount of purification to be asked for? Supposing that it were made compulsory for every effluent to be a little better than the stream—say, that it should contain 10 per cent. or 20 per cent. less pollution—it is obvious that without any very great burden being imposed a decided change might soon be brought about in the condition of many of the smaller rivers and streams. In the few cases where effluents are turned into the upper reaches of a pure stream such a requirement would perhaps be too stringent. It would then suffice to follow the present system of defining an amount of pollution which must not be exceeded; but as matters now stand most towns receive their stream already polluted with the sewage of other towns further up the watershed. Nay, sometimes the effluent of the lower town, though technically a pollution, is actually helping to purify the stream, and if it were possible to keep out the effluent the condition of the stream would be worse than before.

Under such a system as is suggested above, it would be necessary for the effluents to be a definite degree better than the stream. Then, when the Authorities higher up had been brought into line and also turned out effluents of greater purity than the stream, the standard of purity would automatically raise itself by gradual steps. As the stream became less and less polluted it would be incumbent on every Authority gradually to improve the quality of its effluent until at length a uniform degree of excellence was obtained over the whole watershed, instead of the present sporadic system of half a dozen towns turning out fair effluents only to be overwhelmed by the noisome discharge of some neighboring city.

PURIFYING DRINKING WATER

By G. G. NASMITH, M.A., Ph.D., Chemist of the Ontario Board of Health and R. R. GRAHAM, M.B., Assistant Chemist.

Since 1897, when Dr. Woodhead sterilized the water supply system of Maidstone, England, by a solution of chloride of lime, during a typhoid outbreak, this agent has been used more or less spasmodically for similar purposes. In 1898, Kantback showed that .3 to .36 parts of free chlorine in one hundred thousand parts of sewage effluent reduced the number of bacteria from innumerable to about ten per cubic centimetre.

Two years ago a municipality in the United States installed the first system for continuously purfying its water supply by means of chlorine in the form of chloride of lime, the amount of available chlorine being .3 parts per million parts of water The success of this method for one year has established its efficacy and similar plants are now being installed at various other places. The method is so cheap, so efficient and the agent used so harmless that there would seem to be a great field for its usefulness in this and other countries. We have shown that .3 parts of chlorine in a million parts of water or roughly, one pound of chloride of lime to a million pounds of water (500 tons or 100,000 gallons) will not only destroy typhoid and colon bacilli, but practically all bacteria in water except a few spore formers.

It is a valuable means of sterilizing water because chloride of lime may be bought almost anywhere, is very cheap, in the infinitestimal quantity used is not only absolutely harmless but leaves no taste in the water, and with a few directions may be used by anyone to render an infected water safe for drinking purposes.

The writers have worked out a simple method which can be used by miners, prospectors or campers in Northern Ontario or elsewhere, to purify immediately, and on the spot, any water which may be dangerous to drink. For armies in the field such a method should prove invaluable, for every soldier could easily carry a couple of ounces of the chloride of lime and sterilize his own drinking water; hence the experience with enteric fever in South Africa need never be repeated.

The method is as follows:

1. Take a teaspoonful of chloride of lime, containing about one-third available chlorine and remove the excess of powder by rolling a pencil or other round object along the top of the spoon, or by flattening it with a penknife blade so that the excess will be squeezed off.

2. Rub up the teaspoonful of chloride of lime in a little water in a cup, making sure that all lumps are thoroughly broken up, fill the cup and to it, in any convenient receptacle, add three more cupsful of water.

3. Stir up the mixture, allow to stand for a few seconds in order to let any particles settle (this stock solution if kept in a tightly stoppered bottle may be used for four or five days), and add one teaspoonful of this milky stock solution to two gallons of the water to be purified in a pail or other receptacle. Stir thoroughly, in order that the weak chlorine solution will come into contact with all of the bacteria, and allow to stand for ten minutes. This will give approximately one-half part of free chlorine to a million parts of water, and will effectually destroy all typhoid and colon bacilli or other dysentary producing bacilli in the water. The water will be without taste or odor and the trace of free chlorine added rapidly disappears.

The writers have followed this procedure repeatedly, using only the simple apparatus mentioned consisting of a teaspoon, a cup and a two-gallon pail. The water in the pail has been inoculated with typhoid and colon bacilli and examined before and after chlorination. The result was invariably the same, namely, that all typhoid and colon bacilli were destroyed.

No.	Lake Ontario Water. Bacteria per cc. at 20°C.	Lake Ontario Water + Typhoid Bacilli. Bacteria per cc. at 37° C.	Lake Ontario Wat r + Typhoid + 1 part Chlorine per million Bacteria per cc. at 37°C.
1	92	2.144	1
2	84	26,100	1
3	176	15,000	6

No.	Lake Ontario Water. Bacteria per cc. at 20° C.	Lake Ontario Water + Typhoid Bacilli. Bacteria per cc. at 37° C.	Lake Ontario Water + Typhoid + 1 Part Chlorine per Million. Bacteria per cc. at 37° C.
4	154	17,000	2
	Substituting Colon bacilli for Typhoid.		
5	65	95	0
6	132	2,250	1

The method is also applicable to the sterilization of wells which have been infected, provided, of course, that the source of the infection has been removed. It would obviously be futile to sterilize a well situated in a farmyard from which organic matter and bacteria are constantly draining into the well.

If one knows the diameter and depth of the water in the well in feet the amount of chloride of lime may be easily estimated. For instance, the writer wished to destroy the bacteria in the well at his summer cottage, the well being six feet wide by four feet deep. The formula would be (radius) squared x 27.7 x depth of the water, $=3 \times 3 \times 22.7 = 113$ cubic feet of water in the well. One cubic foot contains six and a quarter gallons of water so that there were $113 \times 6\frac{1}{4} =$ about 700 gallons of water in the well.

One and a half pounds of chloride of lime to 100,000 gallons will give roughly one-half part of available chlorine in a million parts of water, or one pound to 66,000 gallons, so that only about one-sixth of an ounce was necessary to add to this well.

The chloride of lime was mixed with water, diluted, and poured into the well, and then thoroughly mixed by plunging a long pole with a couple of strips of wood nailed across one end up and down in the water.

The water before chlorination contained 950 bacteria per cubic centimetre with colon bacilli present; after chlorination there were only 9 bacteria, with no colon bacilli.

The water of Sturgeon lake, which is a typical brown Northern Ontario water was treated with one part of chlorine to a million parts of water, according to the simple method outlined, with the result that the raw riley water count of 15,880 per cc. was reduced to 8 per cc.

Toronto bay water taken from the slip at Aykroyd's boat-house was chlorinated on the spot in a pail found in the boat-house with the following results:

Raw Bay Water. Bacteria per cc. at 37° C.	Colon Bacilli.	Chlorinated with 1 part Chlorine per million. Bacteria per cc. at 37° C.	Chlorinated with .5 part Chlorine per Million. Bacteria per cc. at 37° C.	Colin Bacilli
16,000	present	18	....	absent
25,000	"	9	....	"
18,000	"	....	13	"

Another series was made to determine what amount of chlorine could be added to a water infected with typhoid and colon bacilli which would show a decided excess of chlorine by the Potassium Iodide-starch reaction and yet not be detected by the senses of taste or smell.

Chlorine in parts per Million.	Taste.	Odor.	Typoid, Colin and other bacteria per cc. at 37° C.	Iodide Test after ½-hour.
0	none	none	5,452	none
.5	"	"	0	strong
.33	"	"	0	"
.165	"	"	0	"
.125	"	"	0	slight

This showed conclusively that more than .125 parts per million of free chlorine will destroy typhoid bacilli in Lake Ontario water if properly mixed, and that, though the Iodide test shows an excess of free chlorine in half and hour, not the slightest taste nor odor could be detected by four laboratory workers in strengths up to .5 parts of free chlorine per million, at which strength the taste became evident.

Precautions to be observed:

Chloride of lime deteriorates rapidly when kept in cardboard packages or exposed to air. If fresh from the factory it should contain about ⅓ available chlorine. Of six one-pound packages obtained at random from the shops, three were found of high strength, although the others would be suitable if more of the stock solution were used.

Manufacturer.	Per Cent of available Chlorine found.	Nature of Package.
Mendlesohn Sons "Acme"	33.0	Zinc.
T. Eaton Drug Co.	32.5	Zinc.
Lyman's	29.1	Cardboard resin lined.

Manufacturer.	Per Cent of available Chlorine found.	Nature of Package.
Chemical Laboratories, Ltd. . . .	21.7	Cardboard.
Moody's Royal . . .	20.0	"
National Drug Co.	19.5	"

If the weak variety only is obtainable, then one and a half teaspoonfuls of the stock solution should be added to two gallons of water instead of one teaspoonful.

If the chloride of lime powder be kept in a tightly stoppered bottle it will retain its strength for a long period. The prospector would only need to carry two small bottles, one for the powder and one for the stock solution.

It is very important that the stock solution should be thoroughly mixed with the water to be purified in order that no bacteria may escape the chlorine.

Silt or mud will not materially effect the action of the chlorine. The chlorine will not, however, enter lumps or particles of organic matter, so that if such material is present it should be strained off or allowed to settle and the clear water used for sterilizing.

Waters containing hydrogen sulphide must be given larger quantities of chlorine solution.

AIR AND VENTILATION IN MODERN WARSHIPS

By SURGEON L. F. COPE, R.N.

It may be laid down as a first principle that pure air is as necessary to health as pure food. To ensure a constant supply of pure air is in a modern warship none too easy. There are several factors to contend against:

1. The limited living space. This may be taken on board ship to be about 200 cubic feet per man.
2. The absence of diffusion through the walls of the ship.
3 The love the bluejacket has of keeping all possible means of ventilation closed.

As against these factors must be placed the fact that the air surrounding the ship is good in quality and plentiful in quantity, and that when under way the movement of the ship tends to help ventilation by causing currents of air to flow through all the available openings. In modern ships, then, there are two main methods of ventilation: (1) Natural—by means of ports, scuttles, and hatchways; (2) artificial—by electric fans.

In natural ventilation the movements of air are entirely due to natural laws—diffusion, wind and differences of weight due to differences of temperature. But it is very variable and uneven in its results, owing to the small space and varying power and direction of the wind. In a ship natural ventilation takes place entirely through ports and hatches. The former in the ship's side act as inlets, and the latter almost entirely as outlets, owing to their situations.

It is as well to have some idea of the ventilating power of a 15½-inch circular port. If situated, as it is in modern ships, 5 feet above the deck with a hatchway near it as uptake 9 feet above the deck, with a difference of temperature between the external and internal of 20°, it gives an air delivery on a calm day (allowing for loss by friction) of about 13,000 cubic feet per hour—that is, roughly, sufficient for four men under good conditions. This would naturally be considerably increased if there was any wind blowing, but, if there is a man living or sleeping near such a port, the draught would be to him uncomfortably apparent, and the port would be partly or wholly closed, thus lessening its utility as a ventilating factor. The ventilating power of a port may be increased in calm air by fixing a wind scoop to it, and simi-

larly hatches may be made to act as intakes by means of windsails. It is, however, quite apparent that when 150 men live on a mess deck it is quite impossible to arrange enough ports and hatches to supply them with suficient air by means of natural ventilation alone.

In addition, natural ventilation in ships is in most cases to a great extent stultified by too great approximation of intakes and outlets. It is evident that openings in the ship's side must be dependent on, and governed by, the positions of guns and considerations of strength of structure and by the efficiency of the ship as a fighting machine. It therefore frequently happens that one finds a port and a hatch in close juxtaposition. In such cases the air from the former goes straight out by the latter, causing a strong draught, but no ventilation. Natural ventilation alone cannot keep the air of a ship pure and sweet, even under the best possible conditions, while there are many days in the year when a ship is at sea, when by reason of wind and rough sea all ports in the ship's side, and not infrequently the hatches as well, have to be kept shut. For such occasions artificial ventilation is a prime necessity.

In modern artificial ventilation is carried out by means of electric fans. Taking a typical ship of modern type, there are in all 62 fans, varying in size from 40-inch to 7½-inch in diameter, of which seven act as exhaust fans and 55 as supply. Each fan is connected with a system of air ducts to distribute the air, and with a pipe led down from the open air to supply the air, the opening on deck of the latter being protected by a coaming and a movable mushroom top to prevent the entry of water. A supply fan forces the air into a main discharge pipe, from which at intervals proceed branches, each terminating in a certain space, and thus forming inlets for the space. On the various branches are louvres, and in this way the air is distributed all over the ventilated area, outlets being provided, as in natural ventilation, by the hatches. The exhaust fans are connected with the engine rooms, and by their action tend to obviate the dissipation of heat throughout the ship. With regard to artificial ventilation, the following are the chief desiderata :

1. A sufficiency of trunks and louvres, of such a number as to allow 1 louvre to every 1,000 cubic feet of gross space, giving a supply sufficient for five men.
2. The avoidance of air stagnation and pockets of foul air in places far from natural ventilation. This can best be attaned by having a large cone-shaped terminal to the air trunk opening low down and some distance away from the outlet, and also by having sufficient means of exhaust, a fan if necessary, to prevent the supply fan causing increase of air pressure without true circulation of air.
3. A maximum velocity of air at louvres of 1,000 feet a minute.
4. Louvres should be so placed, if possible, that the air from them does not blow straight on to a hammock, as when this is the case the louvre is shut by the occupant of the hammock.

In the ship in question the sick bay has cot accommodation for ten men, which, with the staff, gives an air space of 425 cubic feet per man. The ventilation supply consists of four side-scuttles and three branches from a 12½-inch electric fan, which gives 4,000 cubic feet a minute. The exhaust is by a skylight and a 10-inch trunk fitted with a mushroom top. The sick bay watercloset has its own supply and exhaust.

With a view to estimating the efficiency value of ventilation, a series of estimations of the CO_2 content of various parts of the ship was undertaken under the following varying conditions:

(a) Optimum condition, with all scuttles and hatches open and fans running.
(b) With only natural ventilation.
(c) With only artificial ventilation.
(d) With scutteles shut, hatches open, no fans running; in fact, the bluejackets' normal.

As far as possible, in all cases in which figures are given there were approximately the same numbers of men present under each condition of ventilation. The results obtained are shown in the attached table. They may be classified as follows:

(a) Under optimum conditions, in practically all the living spaces, CO_2 was present to the extent of 0.6655 per 1,000 cubic feet.
(b) With only natural ventilation: CO_2 present equals 0.9095 per 1,000 cubic feet.
(c) With only artificial ventilation: CO_2 present to the extent of 0.8499 per 1,000 cubic feet.
(d) With no intentional supply of fresh air—in fact, with nothing but really natural ventilation: CO_2 present in proportion of 1.3046 per 1,000 cubic feet.

The above figures represent the average of 100 estimations under each of the stated conditions and probably err in over-estimating the CO_2 present.

As I have already stated, the cubic space per man in most of the living spaces on board is about 200 cubic feet. Having regard to the restricted space per man, it may be rightly considered that the system of ventilation at present in vogue is very fairly successful, particularly as regards the artificial ventilation.

In this connection the following facts are of interest: All the living spaces in the ship, both for officers and men, can be supplied with fresh air by the ventilating fans. These are Davidson's sirocco fans, electrically driven, of 12½ inches diameter, capable of giving 4,000 cubic feet of air per minute when run at maximum speed with free inlet and outlet. One fan of this type is placed in each portion of the mess deck, being supplied with air by means of a trunk leading down from the upper deck.

The engine rooms are separately supplied and exhausted. The supply consists of four 55-inch fans, each giving 31,000 cubic feet per minute; two 25-inch fans each giving 15,500 cubic feet per minute. The exhaust system consists of four 40-inch fans with a capacity of 40,500 cubic feet per minute each. This system is of extreme value in keeping under control the wild heat which naturally exists in large quantities in this vicinity.

A point of some interest is that the air supplied to the living spaces can, in the ship in question, be heated in cold weather. This is effected by passing the air from the fan through tanks in which are placed steam pipes, the steam being derived from the boiler and engine rooms. The heating area in the steam heater is so designed that it shall be able to keep the air in the living spaces at a temperature of 70F. on a cold day at sea, but its great disadvantage is that the air, when supplied to the mess decks, is at a low relative humidity, 46 per cent. This hot air, therefore, has a great drying power than the contained air, and consequently dries the mucous surfaces and brings the body under the debilitating influences of undistributed air of too high a temperature. Some scheme should therefore be evolved to add a trace of water by means of steam supplied to the thermo-tank, so as to bring the relative humidity of the heated air up to 70 per cent.

In the United States navy an apparatus has just been installed in the Alabama for cooling and washing the air supply, but as no results are yet to hand, it is better to defer giving any opinion till some information as to its merits can be obtained from the United States naval authorities. Windsails and cowls do not exist as ventilating agents in the ship in question, so that the electrical fans are solely relied upon for artificial ventilation. Lastly, it must not be forgotten that, as the whole of the lighting of the ship is by electric lights, all the CO_2 produced is of human origin, and consequently there is less CO_2 to get rid of than in days when tallow candles were

The chief effect of occupation of a confined space is the disagreeable odour the air acquires from its occupants. This is due to excreta from the skin, the smell coming from the solid materials of the sweat, fats, cholesterin, etc. The discomfort experienced is due to increased temperature and excessive amount of water vapour, and also to respiratory CO_2 for it has been proved that chemically pure CO_2 can be added to the air to the extent of 1 per cent without causing any appreciable effects. In the case of respired air, however, 5 per cent. causes headache and depression, but, of course, in such a case there is also a great reduction in oxygen. The CO_2 in respired air is, therefore, taken as a measure of the index total impurities. The air in a ship always contains solid material, the human origin of which is strongly

in evidence.

In a well ventilated ship the air is dry and relatively free from organic particles. The most important particulate bodies are the micro-organisms, and, "as a rule, the air of a ship is not free from solid material, derived from the respiratory passages." Ventilation, if satisfactory, would not only renew the air, but also get rid of any micro-organisms in it, and as the air at sea is plentiful and practically free from micro-organisms, it is the best possible air to use for such a purpose.

It is a well-known fact that sore throats, tonsillitis, and the syndrome of symptoms known as "an attack of liver" are commonest on board when a ship is at sea for any length of time. This is undoubtedly due to the fact that under such circumstances there is decreased ventilation, owing to scuttles being closed either to avoid draughts or because of the rough sea. In the ship in question, as soon as the ship goes to sea, all the ventilating fans are started and left running till the ship again gets into harbour, and it is to this that one attributes the freedom from tonsillitis and sore throats that has obtained for some time past in the ship.

In conclusion, then, one may sum up the matter thus: a perfect system of ventilation should be designed in such a manner that the following points are all ensured:

1. Complete and sufficient changing of the air without draughts.
2. In the event of natural ventilation failing, there must be a system of artificial ventilation as good, if not better, to substitute for it.
3. In every case of supply or exhaust, there must be provision for corresponding outlet or inlet.
4. If the air is to be heated, it must also be supplied with moisture, so as not to lower its relative humidity.
5. The openings of all air trunks, whether connected with the supply or exhaust systems, should be placed on the superstructure, so as to enable them to be used at sea in all weathers.

With regard to these points I would suggest the following improvements on the system we now have in the ship in question:

Draughts may be avoided if inlet and outlet are placed sufficiently far apart. Such a system also tends to better ventilation by the prevention of pockets of undisturbed foul air.

With regard to the system of ventilating fans, it seems obvious that some steps must be taken to prevent the trunks from the being rendered useless by closing of the louvres and occlusion of the tubes by means of hammocks or clothes being introduced, as is frequently done. Louvres could be fitted with a padlock, by which means, when once opened, they could be locked, and thus prevented from being closed, while a stout grating placed over the end of the trunk would prevent its being stopped up by introduced foreign bodies.

The men's living spaces should be supplied with exhaust fans. This would tend to a much greater degree of efficiency in ventilation. If run in conjunction with the supply fans, and suitably placed, they should ensure almost perfect draughtless ventilation even under the most adverse circumstances at the same time fulfilling the requirements of a sufficiency of corresponding inlets and outlets.

The openings of air trunks should indubitably all be placed on the superstructure, those on the upper deck being useless in a heavy sea, as they have to be closed to prevent water washing down them, while the superstructure is practically never under water, so that air trunks opening there would be always available.

There can be no doubt that the ventilation of a wharship is a very difficult problem. The structure of a warship is such that its efficiency as a fighting machine renders all other points of secondary interest. In addition to the difficulties due to structure which have to be overcome, there are others due to the character and upbringing of the ship's inhabitants. The bluejacket cannot realize that the cleanliness of the air is as important as the cleanliness of the body, and having been brought up from earliest childhood in surroundings almost hermetically sealed against the entrance of fresh air, an atmosphere that has got past "stuffy" seems to him merely normal, and consequently he regards any attempt at the admission of fresh air as an infringement of his liberties.

In the face of such difficulties, the pres-

ent satisfactory condition of the air in modern ships reflects great credit on the officers whose duties it has been for years past to gradually evolve a system which needs but slight attention to details to be classed as almost perfect.

ANTERIOR POLIOMYELITIS

By FRANK MOORE, M.B.

This disease made its appearance in the neighborhood of Grey County, Ontario, about October 10th, of the present year, attacking a girl twelve years of age, a daughter of Mr. S.——, living about three miles from town and attending a rural school. It was at first looked on by the parents as an outbreak of "Grippe." Some weakness and stiffness of gait was noticed, but thought little of, until her brother, two years older, became similarly but more violently ill and with a good deal of severe muscular pain. Paralysis rapidly developed, becoming almost complete in both lower limbs.

Prior to this there had been no known cases in the district for several years; the nearest at the time being:—at one point fifteen miles southeast, and at another about the same distance northwest. On October 23rd two more cases appeared at a point about twelve miles southwest, a rugged lad, A.—— T——, aged fifteen, who died on the sixth day from involvement of the respiratory muscles; and his brother, G—— T——, one day later, in showing initial symptoms, had complete paralysis of one lower limb. The next case occurred Nov. 13th, a girl ten years of age, who had returned from Manitoba about three weeks before, and was also attending a rural school; school and residence being nearly four miles from the nearest of the other cases. The parents had not heard of the disease while in the West nor until driving home. Both legs are badly paralysed. Her sister, a little younger and closely associated with her, had had "a cold" for a week or so, but nothing more.

The most important features of these cases. are the facts bearing on the question of contagion. There is the wide distribution with no association direct nor indirect, so far as we could trace, between centres of infection. The different families were not frequenting the same places, and no other cases have developed in the immediate neighborhood in any instance (obviously there has not been sufficient time in the last). In the S—— family one was ill a few days before the other, suggesting the possibility of the second case being the result of contagion. The T—— boys were members of a large family, only a feeble attempt at isolation was made and no other cases developed. In all the families concerned in this report, I know of neurotic weakness strongly marked in either the patients themselves or in their immediate relatives, embracing epilepsy, imbecility, idiocy, hysteria, stammering and other forms of nervous instability. I am satisfied that there were very few, if any, non-typical cases in the district in which the diagnosis was overlooked. There has been, however, an epdemic for some weeks of a mild type of influenza in which some children showed more dullness and apathy than is usual in such cases.

In view of the fact that our most expert pathologists have up to the present been unable to isolate the infecting organism, we are justified in speculating a little on the etiology. So that if driven to form a conclusion from what observations I have been able to make on the epidemic here, I would say the disease is most likely caused by one of the more common varities of "cold-producing" bacteria infecting the buccal and respiratory mucosa, developing unusual ability to travel spine-ward and so reaching and infecting the spinal cord in the more susceptible cases.

SCHOOL CHILDREN AND PUBLIC HEALTH

By C. E. TERRY, M. D.

In the dissemination of disease, schools plays a very important part for two reasons: first, the overcrowding, and second the habits of childhood. The ideas concerning the spread of disease held for so many years are gradually, but surely being changed as the result of recent investigations. Most of you recall when malaria was attributed to the vapors arising from swamps and marshes, miasma it was called. Chills and fever were attributed to the inhalation of these vapors, and it was not until a few years ago that the agency of the mosquito was recognized. In yellow fever again, until the completion of Dr. Reed's historic work in Cuba, air contagion or infection from rooms or clothing was believed to be the correct explanation of the epidemics. In Philadelphia, about a century ago, when over 10,000 people died of yellow fever in one epidemic, a number of scientific men of high standing attributed the scourage to a ship load of coffee that had been allowed to decompose on one of the docks.

It is still not uncommon to see people hold their handkerchiefs over their noses or cross the street, while passing a house on which a quarantine card indicates the presence of some contagious disease. The gradual evolution of the germ theory of disease and the consequent increase in our knowledge of its causes has explained many things in its transmission, which before were enshrouded in mystery and superstitution. It has shown us among other things that most contagion is very feeble, and that few if any diseases are carried through the air for a greater distance than a few feet. We have learned that a more or less direct contact is necessary to acquire scarlet fever, small pox, diphtheria; that tuberculosis requires an intimate and prolonged association in most instances; and that only a small percentage of those exposed to any of the contagious or infectious diseases succumb to contagion.

As we learn more of the life history of the germs causing disease we learn that their existence outside of an infected person is very short. Typhoid fever germs, for instance, will only live a week or ten days in pure water, dying out for lack of food, tuberculosis bacilli, among the most difficult of all to destroy, resist drying in dust but a short time, and a room occupied by a scarlet fever patient will hold the infection but a brief period if flooded with fresh air and sunshine. In fact, search as we may, in soil, in water, in houses that have harbored contagion of every kind, we find it very difficult to prove a case against such a supposed focus.

How, then, are these diseases spread, is a natural query. Generally speaking, they are spread in food and water or by insect, animal or human carriers. The role of the mosquito in malaria, yellow fever and some other tropical diseases is too well known to need more than mention. The tick in Rocky Mountain fever and in Texas fever of cattle, and the flea and rat working in perfect harmony in the spread of the bubonic plague has been so well shown and the knowledge put into practice with such signal success recently in San Francisco by the United States marine hospital service, that nearly every magazine and paper has spread the word broadcast.

That milk, water and other food supplies cause local typhoid epidemics not infrequently, is pretty generally accepted at the present time. This review brings us to the third variety of carriers, infected individuals, school children as well as others. In order to fully realize the important part played in the dissemination of disease by the human carrier, it is necessary to appreciate one basic truth. Every case of infectious disease comes directly or indirectly from another case of that disease. Like breeds like in disease germs just as infallibly as in animals or human beings. Every disease, in other words, is due to a specific cause, no two to the same cause, nor may one disease turn into another. It is not uncommon to hear the statement that a bad sore throat "turned" into diptheria. It was diphtheria from the first; typho-malaria is a very much overworked pair of words, used by many to indicate one or the other of

these diseases and conveying to most a false impression of the true state of affairs. It is perfectly possible for two diseases to coexist in the same individual, but each is due to its specific cause. The sooner these waste paper baskets for imperfect diagnosis are abandoned by physicians the sooner will the general public come to understand the true nature of disease.

The truth of the above statements, as to the specific nature of disease, will, I am sure, appeal to every thinking person, and by it alone are we able to understand the dissemination of these diseases. Until comparatively recent years, however, it was not known how long an individual once infected with a disease might, after recovery, continue a carrier to others.

Take typhoid fever for an example of a type. It is too well known to need argument that an individual ill with typhoid is constantly discharging the typhoid germs and we also know that in order to contract typhoid fever, these germs must be swallowed, so that the danger to one nursing this disease is a very real one, not because the germs are in the room, or on the patient's body or the bed linen, but because by contact with these things they get on our hands, or the spoon or cup used by the patient, and unless we thoroughly cleanse our hands and these utensils we may very easily carry them to our mouth with our food and so contract the disease. It is not at all uncommon for physicians and nurses to contract it in this manner. This is by direct contact. Again, the discharges from a case of typhoid may be so disposed of as to infect a water supply and indirectly a large number of people, but the first case must be brought to a coumunity. It is not bred in filth, in dirty water nor in dirty milk, it is put there by a human carrier. A case of typhoid fever is caused by carelessness.

The typhoid patient does not cease to carry germs with the remission of his fever. For weeks and months frequently they continue in their host, and cases are of record where for firteen or twenty years after an attack the germs could still be recovered. Many small outbreaks have been traced to such carriers. In one instance a cook was proved to have infected twenty-six persons in six different families during a period of five years. It is, of course, unusual to find carriers of years' standing, but a large percentage are carriers for six or eight weeks after recovery, and it has recently been estimated that about $2\frac{1}{2}$per cent. of all typhoid patients become "chronic" carriers. Such carriers occur, as nearly as can be determined, at about the rate of one in every 500 people. A carrier of this kind is a far greater menace to the public than a case confined to bed, for he takes no precautions and his friends and acquaintances, ignorant of his dangerous burden, may not protect themselves.

Among children, the carriers most commonly found are those of diptheria and scarlet fever. The germs of diptheria may remain in the throat for several weeks after the disappearance of the membrane. The length of time that a child may remain a carrier of this disease is not definitely known, but it is certain, in a large percentage of cases, the germs may be recovered from the throat for several weeks, and in a no small percentage for months or even years after complete recovery. The percentage of carriers among all school children has been variously estimated at from 3 to 10 per cent. Fortunately, observations all show that the longer these germs are carried in a throat the less virulent they become. In this disease, as in many others, one factor in its spread must not be lost sight of; the mild, unrecognized or missed cases. All degrees of severity are seen in diptheria from the most maligant to those so mild as to cause none or but the slightest inconvenience to the patient, a sore throat of a few hours' duration, a little headache may be the only symptoms, and many cases thus pass unrecognized by parents and throughout the whole course mingle freely with other people. Many a severe or fatal case is contracted from one too mild to merit the attention of even the most watchful mother.

Scarlet fever resembles very closely diphthheria in its transmission, and like the latter disease it may be of so mild a type as to entirely escape detection. The cause of this disease has not been discovered, so unfortunately the laboratory may not assist us by verifying our clinical observations, but each year the evidence is growing stronger against its being an air-borne disease. In tenement houses or flats scar-

let fever has rarely been known to spread from one family to another, and surely, if it were air-born, such conditions which exist in all of our larger cities would seem ideal for its dissemination. Contact, actual contact, is certainly the most common mode of transmission, though food, as milk, must not be overlooked in the three already mentioned—typhoid, diphtheria and scarlet fever. Many epidemics have been shown to have started through this medium. What has been said of these three will apply almost identically to all of the contagious diseases—measles, small-pox, chicken pox, etc.

The school children play a considerable part in disease dissemination, as might be expected, from their close contact with each other in crowded school rooms, and the habits of their age, their intimate contact during recess in their games, the disgusting common drinking cup found in most schools, their habit of "swapping" apple cores, chewing gum, slate pencils, etc. All these customary practices of childhood furnish the most ideal conditions for contact infection.

They are, by nature, dirty in their habits: cleanliness is not an instinct, but the result of training; few of us are overtrained. Besides the apple core and common drinking cup, the opportunities for contact infection are so numerous as to defy even mention. The hands and fingers, in all probability the agents most commonly at fault, to quote a moment from one of the most recent words on the subject, "If one takes the trouble to watch for a time his neighbors, or even himself, he will be surprised to note the number of times that the fingers go to the mouth. Not only is the saliva made use of for a great variety of purposes, and numberless articles are, for one reason or another, placed in the mouth, but for no reason whatever, and all unconsciously, the fingers are with great frequency raised to the lips. Who can doubt that if the salivary glands secreted indigo, the fingers would continually be stained a deep blue? All successful commerce is reciprocal, and in this universal trade in human saliva the fingers not only bring foreign secretions to the mouth of their owner, but there, exchanging them for his own, distribute the latter to everything that the hand touches. This happens not once, but scores and hundreds of times during the day's round of the individual. The cook spreads his saliva on the muffins and rolls, the waitress infects the glasses and spoons, the moistened fingers of the peddler arrange his fruit, the thumb of the milkman is in his measure, the reader moistens the page of his book, the conductor his transfer ticket, the lady the fingers of her glove. Everyone is busily engaged in this distribution of saliva, so that the end of each day finds this secretion freely distributed on the doors, window sills, furniture and playthings in the home, the straps of trolley cars, the counters and desks of stores and offices—indeed upon everything that the hands of man touch. What avails it if the germs do die quickly? A fresh supply is furnished every day.

Childhood is even more prone to these habits, and we find that the age when they are most susceptible to contagious diseases, two to eight or ten, is that at which they mingle with each other most intimately and before school and home training have taught them any degrees of nicety in their personal habits. Need we look to the winds to account for our school epidemics?

I recently went through a hospital for contagious diseases in Providence, R.I., among the one-hundred-odd child inmates, scarlet fever, measles, diphtheria, whooping cough, typhoid fever and mumps were represented. The wards and rooms were all widely open into the corridors. Cases of different disease in adjoining rooms and wards, but no mingling of the children was permitted, except during convalescence, and then only those recovering from the same disease. The same nurses attended all, and the only precautions observed was a careful washing of the hands with soap and water before leaving each room and the putting on of a gown where close contact with a patient was required. The conditions for air-borne infection could not have been better, for the large open windows and wide corridors furnished a constant draught of air from one ward or room to another, and yet there had not been since that hospital was started a single instance of contagion among its inmates, in fact, so strong is the belief of the medical staff in the fallacy of air infection that they are now

planning to put all different diseases in the same ward as long as the little sufferers are confined to bed and thus may not come in actual contact with each other. This will doubtless sounds like rank heresy to many but there is much substantiating evidence and it is a matter of record in nearly all the contagious disease hospitals, that contagion among the inmates occurs in inverse ratio as percautions against contact infection are carefully observed.

In the schools the reverse conditions exist and epidemics are of common occurrence. The sooner we accept these ideas and change our mode of attack from the infected room, bedclothes, books and toys to the carriers themselves, the sooner will our efforts against contagion among our school children meet with success. Of what use to fumigate a room after a case of diphtheria, to burn books and toys, when we allow the patient, recovered himself it is true, but still harboring the germ of the disease in his throat and nose to go back to school? His bed room will be visited by few, if any, and the infection will soon die out for lack of food, while the carrier jubilent at his release, relates daily, in intomate association to his youthful hearers, the hardships of his quarantine or illustrates with his or someone else's slate pencil how the nurse swabbed out his throat.

The matter of a proper period of quarantine would seem, at first sight to be one of paramount importance. It is, however, one of many aspects and fraught with such hardships to the victim, if practiced to its logical conclusion, that the best I can say of it at present is that it must be of an arbitrary length. It is at once apparent that to quarantine a chronic carrier would be an absurdity. We should, however, quarantine contagious cases until we have reasonable assurance that the proportion of chronic carriers is reduced to a minimum. There is, however, a class of cases, seen especialy among children, which merit much more attention than has been bestowed upon them in the past, the mild, unrecognized cases. It is true of most epidemics that these mild types far outnumber those confined to bed. This is a very real danger in our schools and one which has been sadly neglected.

How may this be done? How may this attention be given? No means has yet been devised for detecting all of these mild cases. A great many, however, can be detected by a systematic medical school inspection as practiced in many of the cities of Europe. To be efficient it should be done at short intervals and with redoubled energy and care during times of prevalence of contagious diseases. The throats, noses, ears, eyes of every school child should be carefully examined for the existence of discharges which so often carry infection from one to another. Many epidemics of the lesser maladies as chicken pox, itch and other skin affections can be thus controlled with comparative ease and no inconsiderable number of cases of diphtheria, scarlet fever and measles will be prevented.

Another result of such a system entirely aside from the prevention of contagion, is that obtained by the discovery of other physical defects, as adenoids and enlarged tonsils, which seriously affect the health and development of many children, of defective teeth, errors of vision, cases of malnutrition, and innumerable conditions which commonly escape the attention of the parents. Childhood is afflicted with a great number of conditions, which, while they do not threaten life and often cause few or no symptoms to the untrained observor, yet seriously impair the health of the sufferer and render him a prey to many more serious complaints which he would escape, were his resisting powers not weakened by these defects. A child with adenoids and enlarged tonsils, a mouth breather, is far more liable to infection by certain diseases, than one not so handicapped. A child suffering from astigmatism or near sightedness cannot possibly, without a far greater expenditure of energy, keep up in his studies with a child endowed with perfect vision.

It has been found where medical school inspection has been practiced that from 60 per cent. to 70 per cent. of all school children have some physical defect, and where routine examination for such defects are made and the cases found, advised as to the proper course to pursue, referred to their family physician, treated at a dispensary or by a visiting nurse in their

homes under the supervision of a physician, the efficiency of the children has been increased from 25 to 40 per cent. It is impossible in an article of this length to more than touch upon the possibilities of this system. Its value may be easily investigated by anyone interested, and the most glowing accounts of the results obtained will be had from those communities where it is in vogue.

By no means the least of its benefits is the education it affords both child and parent in hygiene and sanitation, in cleanliness, in proper living. In my opinion the crusade against diseases, not only in our schools, but in every walk of life, is far more a matter of public education and intelligent co-operation, of personal and home cleanliness, than it is of quarantine and fumigation. No movement of so far reaching a nature, of such wide necessity, if I may use the term, can obtain success without the intelligent co-operation of the community at large. The supply of sanitation will never be greater than the demand for it; sanitatary science has always received the attention of but few, and today it lags far behind the other sciences. We educate our physicians and nurses and then say to them, "I will give you no employment until I am sick." How much more valuable than their ministration at such times, would be advise from them that would prevent that sickness. We have too many "sick" nurses and too few "health" nurses.

A district and school nurse of Rochester, N. Y., one who, among her other duties instructed young mothers of the more ignorant classes, in the proper way of caring for and feeding their young children, attended an opperation for bowlegs, performed by a brilliant orthopedic surgeon of that city. The condition was caused by rickets, a disease of malnutrition. Full of enthusiasm and interest at what she had just seen, she hurried into the office of Dr. Goler, her chief, and exclaimed, "Oh, what a splendid work Dr. ——— is doing, straightening out these poor little children's crooked legs." "Yes," answered Dr. Goler, "but do you never think of the splendid work you as a health nurse are doing and do you not realize if there were more of you Dr. ——— would not have an occupation?

The school child must be given his share of this education, he may be told, in simple language, much that will be of interest and value to him during his school life and later, he must be made to realize the virture of cleanliness, and according to his age the modes of disease dissemination, he must be watched while yet too young to understand and can be converted into an intelligent and enthusiastic ally when older; and as a result of such training he will carry with him into later life, a knowledge which was denied his parents and one of which he will never regret the acquisition.

Older people are hard to convert to new theories, they do not see bread and meat in sanitation, nor dollars in sewers. The oft repeated phrase "I was not taught that when I went to school" shows both the indifference and incredulty of age and the strength of childhood impression, translated it means "I don't believe it and you can not convince me." It is human nature crystalized. Let us then turn to the children, and instill into their receptive minds correct ideas of sanitation of disease prevention, make of them voters and office holders who will bring into their public carreer a due appreciation of the value of public health.

Above all should we use our best endeavors to protect these future citizens against disease, and to remedy in them those defects of childhood, small in themselves, but which are such a predisposing cause to infection of all kinds. As a well known author has truly said: "The future of a country depends on its poor children. If they are to do right they must be saved from ill health, ignorance and vice, and the first step is to give them good food and air, so that they shall have strong little bodies."

World Views

The Health Caravan.

Once upon a time writes Helen Macdonald in "Home Chat," when a caravan passed though a village people said with more or less interest. "Gipsies!" and gipsies they were. Now the occupants may be almost anybody—a duke and duchess making a quiet tour of exploration in the English lanes, ardent politicians determined to let not the smallest hamlet remain ignorant as to the right way to vote, colporteurs preaching the Gospel and selling Bibles, and now, newest of all, people who preach the doctrine of health.

It was Lady Aberdeen who first thought of sending out a health caravan. You see a van can go over even the worst roads and up and down the most difficult hills, and so can reach people right off the beaten track, and these are very often the people who need to be taught, because their opportunities for receiving new ideas are so much more limited than those of folk living in town. Lady Aberdeen, finding that thousands of Irish people died each year because they were ignorant of even the simplest rules of health, sent out caravans and lecturers to preach the gospel of open-air and cleanliness, and in a very little while it was apparent that much good had resulted.

So the "Women's Imperial Health Association" took up the idea, and in August last Miss Lena Ashwell, the famous Canadian actress, christened and started off the first English health caravan, the "Aurora" --the "dawn of a new era," and now a second one has been started.

The lecturer and the caravan are not out for fame and glory. Not even for such fame as the local newspapers can give, for they go out of their way to penetrate into the most out-of-the-way villages on the route, and there preach the gospel of the open window to the people whom curiosity brings. The lectures are given, from the steps of the caravan, on the village green, in the school-room, or sometimes on the squire's lawn if permitted. Sometimes the teetotaler lecturers are invited to lecture in the Town Hall, the mayor himself presiding.

What do they preach? you may ask.

They preach the ten commandments of health, and give practical advice on the care of babies. And the lectures are not a bit dull, for the caravan contains a biograph, and gives centematograph entertainments to illustrate the lectures.

Babies are the association's specialty, and the biograph pictures of the right and wrong way to dress and bath a baby are most amusing and interesting. But many mothers who gather round to listen, and look, and laugh, get useful hints.

Pictures are shown of two babies of the same age, one naturally fed by its mother, the other by artificial foods, and there is no doubt as to which looks the healthier. Pamphlets are distributed when the lectures are over, and in one entitled "The Cry of the children" the baby is supposed to make the following requests:

1. Please let me sleep in a cot all to myself, and do please keep my nursery window open.
2. Please nurse me yourself (as God meant you to) till I am nine months old.
3. Please feed me regularly, let me sleep all I want, and don't stick pins into my clothes, and then I promise not to cry.
4. Please scald dairy milk before giving it to me to drink, and remember to cleanse and scald my bottle every time I use it.
5. Please don't give me artificial foods, unless ordered by the physician, nor scraps of anything left over by grown-ups, or I am afraid I shall be very ill.
6. Please let me have loose clothes, as I love to move my arms and kick about with my legs.
7. Please give me a bath every day, and let me splash about as much as I like.

8. Please let me out in the open air all you can. I love to sleep out in the pram.
9. Please don't let stupid grown-ups kiss and dandle me; it makes me so cross.
10. Please when I am bigger tell me all the things every boy and girl should know, and don't let me hear about them first from horrid boys and girls.

The last two requests appeal to me most. It does seem a shame to make a poor, helpless baby submit to caresses from people whom it probably loathes with all its heart. This is one of the things that Queen Mary is most strict about. She much objects to children being kissed and caressed by anyone outside their immediate family, and there is a strict rule against it in the Royal nurseries.

As for the last request, it would, indeed, be wise, and save much pain and sorrow, if every mother would tell her girls, and every father his boys, of the great facts of life before they send their children out into the world. Things sound so different simply and lovingly told to what they do when they are whispered in corners as something wrong and secret.

Half the girls who "go wrong" do so through ignorance, and unless a girl is to spend her life in a convent it is cruel kindness to try to preserve her innocence by keeping her ignorant.

The lecturer has much to say and many pictures to show of interest to housekeepers. One set of films that greatly amused one audience was a series showing the right and wrong way to sweep and dust a room.

First came a smart, slapdash kind of girl, who swept the carpet virorously, while the dust flew everywhere. Then she blew the dust off the china and silver, and flicked a little more off the furniture with her duster, and then—a little touch that delighted the onlookers—mopped her heated brow with the same duster. After that she left the room, and the dust that she had disturbed, but not removed, settled happily down again.

She was followed by a properly-trained maid, her hair covered with a cap, so that it should not collect the wicked microbes that lurk in dust, her dress protectd by an overall.

She shook the rugs and carpet out of doors, and left them to air a-while. She put the flowers outside, too, for they are great harbourers of dust; then with well-washed tealeaves, a damp duster, and a mop she "did" the room, and not even the smallest dust microbe dared to lift its head.

But more than anything else the lecturers are insisting on the value of fresh air, for one of the great objects of the tour is to wage war on consumption, the scourge from which ninety thousand people die in England during a year.

One photograph film showed Luke Fildes's famous picture "The Doctor"—the dying child, the anxious father, and weeping mother with the stern doctor by the bedside. Pointing to the picture, "Look," cried the lecturer, "the window is shut! No wonder the child is dying."

Awakening the Mandarin.

The reforming of the political aspect of China has brought with it some changes in social conditions and it seems as though many more were to follow. Among those who have felt these changed conditions are the mandarins, whose altered official routine is described by the North China Daily News. The old dreamy days when a mandarin spent hours in dolce far niente, "a demigod amid subservient crowds, delighting himself with the philosophy and poetry of his land," are all gone since the introduction of telegraph, telephone, and railways.

The national awakening, bringing with it the reorganization of the army, the introduction of occidental sanitary systems, of modern prisons, and other reforms, has made mandarin life not what it once was. Now that official has to raise regiments of modern drilled soldiers and find the money to equip and maintain them; has to build expensive barracks and hospitals, erect model prisons, and must refrain from old time punishments and find the money for all these bothersome novelties. He is bombarded with telegrams from Peking, and has to withstand attacks by the reform party and the free press.

Poppy growing is forbidden, but he must compel the reluctant agriculturist to raise cotton and other products. Licensed gambling has been suppressed, but he must raise

the revenue thus lost by increasing the tax on salt and other necessities. This causes riots, and he must put these down. The enraged and harried taxpayers no longer stand in fear of the once revered mandarin, and they do not hesitate to attack his person when he appears on the streets. It requires the wisdom of a Confucius for a mandarin to maintain his dignity under the new order of things.

The Ant in a New Character.

The ant has lately been presented, as we learn from the "New York Medical Journal," in a new light by Captain Percy L. Jones, of the United States Army Medical Corps. We are learning much of the baleful activity of the fly in the dissemination of disease. Captain Jones' observations, therefore, which were made in the Philippines, come very opportunely as offering a possible remedy to the dangers which threaten human life. Having noticed that flies are comparatavely rare in the Philippines, he ascertained that there is a species of ant which finds the larvae of the fly very much to its gastronomic taste. The way in which the ant deals with the larva is described by Captain Jones as follows: "Upon watching these ants attack fly larvae, it is interesting to note that they do so in a way which proves that they are no novices at the procedure. One will attack an extremity and apparently bite it, and as soon as the larva begins to coil and makes efforts to escape, numbers of others will immediately jump upon it, and in the course of a few moments the larva will be apparently dead. I believe that the ant introduces some venom in the act of biting, formic acid in character, which preserves the larva as food until such time as the ant needs it—cans it, in other words. As soon as the struggles of the larva have ceased, they haul it off to their nests and return for others. In many instances I have seen them carry away pupae. It will be interesting for the reader to procure a few maggots and place them over an ant bed." But what would the antivivisectionists say? This ant has other excellent qualities. It is said to destroy bed bugs as well as flies. It might be worth while trying it for this purpose elsewhere. There is one cloud on the bright horizon of fly destruction opened up by Captain Jones' observations. Mr. Banks, official entomologist in the Bureau of Science in Manila, doubts whether the particular species of ant which takes this field of hygienic industry for its province is found in the United States: indeed, it does not seem to be yet classified. Captain Jones, who is evidently a practical man, has considered the expediency of introducing the Philippine ant into countries where flies are recognized as enemies to health. He thinks that further study of the insect's habits is needed before it is indiscriminately let loose everywhere on flies, for, besides its qualifications as a scavanger and as a destroyer of flies, it may have undesirable propensities, such as an inclination to consume wood and other valuable articles. We must therefore, it would seem, before calling this ant to our assistance, take heed lest we suffer the fate which has often overtaken nations which called in foreign assistance in time of invasion.

French Scholars' Health Record.

A French Parliamentary Sub-Commission on Primary Education has decided to recommend that every scholar shall have a health record to accompany him throughout his school career. A Bill has already been drafted embodying the recommendations of the Commission. All public and private schools throughout France will, in each department, be under the control of a medical inspection service. The inspecting physician will have to visit all day schools and boarding schools and point out the sanitary improvements which are necessary. He will inquire into the subject of ventilation, heating, cleanliness, food, and hours of work, sleep, rest, and excerise. Twice a year he will examine the scholars, and note any changes since their entrance. All his observations must be entered in a book of health record, for which he alone will be responsible, and which he alone may use. He must note the results of his observations as to the respiratory organs, cutaneous system, sight, hearing, and teeth of the scholars, and he must specially see that they are protected against tuberculosis and other contagious diseases. The expense of this

service will be borne by the Communes, Departments, and State.

The Cat and the Bubonic Plague.

It was stated recently that Japan was importing cats for the purpose of combating the bubonic plague, and the use of cats to the same end is being urged in India. In an article contributed to the British Medical Journal by Dr. Andrew Buchanan he shows the importance of keeping cats in India as a protection against the spread of the plague. It has been demonstrated that the scourge is spread by fleas carried by rats, and Dr. Buchanan declares his conviction that if cats were widely kept the rats in India would be soon destroyed and the plague eliminated.

As a matter of fact his faith has been, in a large measure, proved by his works. In certain districts he has experimnted in preventing the plague by keeping cats, and met with most satisfactory results, hence he urges the government to encourage the use of cats in the servants' quarters of Indian houses. His suggestion is favored by the London Spectator and it expresses the hope that it will be acted upon. The Spectator thinks that the worship of cats among the ancient Egyptians was recognition of their sanitary uses, and it calls attention to the fact, according to Blackstone, that "among our elder ancestors, the ancient Britons, cats were looked upon as creatures of intrinsic value, and the killing of one was a grievous crime, and subjected the offender to a fine, especially if it belonged to the king's household, and was the custos horrei regii—warden of the royal barn—for which there was a peculiar forfeiture."

The common law of England recognizes the usefulness of the cat and the master of a ship loaded with goods which are subject to depredations of rats is bound to have cats aboard or he can not charge the insurer for any losses suffered. But in the United States there is no law providing punishment for stealing or killing a cat, although in grain producing districts they perform a good service by keeping down the rats, and have been the means of saving grain merchants many thousands of dollars.

Most of us will agree with the Spectator that if the casts accomplish the great work of exterminating the plague in India a statue of a cat should be set up in every great city of that land and underneath it should be placed "in Sanscrit, in English, in Persian and in the tongue of the province a suitable inscription to the cleanest and most self-respecting domestic beast."

If in the end the cat shall triumph over the bubonic plague which has carried off hundreds of thousands of people in India it will have succeeded where enlightened medical science has failed.

The Physician's Future.

"Instead of a town of 5,000 or 10,000 people having twenty to thirty physicians," says Dr. Judson Perry Walsh, Dean of Pennsylvania State University, "each holding himself in readiness to set a fracture, amputate a limb, adjust spectacles to weak eyes, treat fevers, eruptions, diseases of the eye, ear, throat, stomach, lungs, intestines, and so on down the calendar of human diseases, I expect before the middle of the twentieth century that we shall see such towns and probably portions of the surrounding country under the care of a staff of physicians in the employ of the Government—State, or, possibly, National.

"This medical staff will have to do many other things in the community. If a schoolhouse, a dwelling house, an opera house, or a factory is to be built, the plans must be submitted to this staff for approval, in order that the heating, venilation and sanitary appliances may be correct, and that none of these things may become a menace to the health, and therefore, to the happiness and usefulness of any portion of the community; the sewerage system, the water supply of the community, the street cleaning, and, possibly, the house cleaning will be under the inspection of these medical experts."

Smokeless Factories.

The era of smokeless cities is found by Peter Fyfe, chief sanitary inspector of Glasgow, Scotland, to be almost in sight. If the smoke came chiefly from factory chimneys, as has been supposed, remedies are already at hand, but experiments last year showed that the waste gases from

forty household chimneys equal in cubic feet those of an average factory chimney, and to prevent this loss some new fireplace or some smokeless fuel must be awaited.

The saving of factory smoke is an economical as well as sanitary gain. Complaint having been made of smoke from four boilers of the Glasgow sewage department, a well-known smoke-preventing plant was applied to three of the boilers, and for comparison the same kind of fuel was used in the next seven months as had been used in the corresponding months of the preceding year.

The actual saving of money for the seven months was $1,100. All smoke was prevented, all steam required was raised in three boilers instead of four, and there was an increase of 240,000,000 gallons in the sewage pumped. The smoke-consuming apparatus cost about $1,000 for each boiler, requiring practically no repairs. A cheaper fuel is now used, and this increases the saving.

Whitewashing the Quack.

As a contribution, says TRUTH, to the discussion on the increase of quackery a little volume entitled "A Sequel to 'Secret Remedies,'" sent us by the author, Mr. Frederick Phillips, has many points of interest. Though it would be hardly fair to describe the author as an apologist for the quacks, yet the volume is confessedly an attempt to present to the public the case in defence of the vendors of nostrums against the attacks of the medical profession as disclosed in "Secret Remedies." Mr. Phillips has done his best with the material at his disposal, but the net result is merely to reveal how very little there is to be said in favour of the present system of things, which allows anybody to put up in bottle or pill-box any miscellaneous assortment of drugs his fancy may dictate, and to advertise the conglomeration as a cure for any or every disease to which mankind is subject.

One very noticeable point is the shyness evinced by the majority of patent medicine vendors in availing themselves of the opportunity Mr. Phillips has given them of saying a word in their own defence. About a hundred proprietary articles were dealt with in "Secret Remedies," and the proprietors have been invited to make any statement they please regarding the analyses of their nostrums made by the British Medical Association. Only twenty-two responded, and of these the majority content themselves with the remark that the analysis was incorrect or far from being true. One exception is the Derk P. Yonkerman Company, which makes a great point of the failure of the analyst to discover ipecacuanha wine in Tuberculozyne, and makes anew the assertion that the presence of salts of copper in this specific for consumption is the basis of the theory of the cure. The value of this claim was effectually disposed of in TRUTH, when we pointed out that all such statements had been eliminated from the company's advertising matter in America, because their retention would bring the company within the purview of the U. S. A. Post Office fraud order. Another exception is the notorious "Dr." Kidd, of Baltimore, who supplies a list of the various ingredients contained in his various tablets, which differs very considerably from those found by the analyst. Kidd may be right and the analyst may be wrong. In his case the danger to the public lies in his undertaking the diagnosis and treatment of patients whom he has never seen without any other information than their own description of their symptoms. That is quackery of the most mischievous type, and the question as to what drugs are or are not prescribed is of minor importance.

But this contention on the part of twenty-two proprietors of secret remedies that skilled analysis is not able to reveal the component parts is a double-edged sword. What right has any man to thrust down the throats of the public blends of drugs which may or may not be innocuous, but which in any case are known only to the manufacturer? It will be urged, of course, that the owner of a formula of a pill has as much right to exercise proprietorial rights over it as the owner of a cow or a field has to enjoy undisturbed possession of his property. So long as he makes his pills for his own consumption the argument would hold good. But the public welfare must of necessity over-ride individual rights of profit-making, and when

the formula-owner, for motives of gain, undertakes to cure the public with his pills the public has the right to call upon him to submit his formula to the proof of publication. In almost every European country but England this simple right of the public to be protected against the secret remedy monger is already recognised. France insists on the official registration of the formulæ of proprietary medicines. Italy has a similar law in force. Germany forbids the advertisement of a remedy of which the constituents are not disclosed. Austria similarly protects the public against the undue pretensions of the quack, and even Switzerland insists upon the disclosure of the medicaments entering into pill or potion advertised for the cure of disease. In certain of our self-governing colonies the wisdom of similar protective measures has been seen and acted upon. But in England there is absolutely no law to prevent any one putting a few cheap drugs into a bottle, advertising the mixture as a cure for consumption or cancer, and growing fat on the shillings or guineas of the unfortunate sufferers, who will grasp at any chance, however remote, which offers them a prospect of a restoration to health. From quackery of this type the compulsory disclosure of the ingredients would at least offer a measure of protection.

Sanitation in England.

Dr. G. S. Graham-Smith in England has been investigating the question of flies as the carriers of infection, and has just published a third communication on the subject. His latest work has been with reference to the way in which flies carry infection. It has been believed and currently stated that by crawling on food the flies leave infection behind them. But Dr. Graham-Smith finds that the non-spore bearing bacteria usually survive only a few hours on the flies' wings or legs. The flies can, however, infect a sterile plate for several days, and it seems to be a fact that they try to suck the plate, and in so doing regurgitate some fluid from the crop which infects the plate. Within the fly the non-spore bearing bacteria often survive for several days, and in the fly specks they may be active for two days. No evidence has been adduced that the bacteria multiply within the fly's body. In his researches Dr. Graham-Smith used pure cultures of various pathogenic bacteria, and asserts that it is not his belief that the fly can naturally come in contact with such pure material. He does not seem to find much evidence that flies are a frequent source of disease by infecting food.

Immunization against disease by swallowing a prophylactic is a method having certain disadvantages over inoculation, for there are many who will swallow anything at the order of the physician who objects to vaccination. Diphtheria anti-toxin, it is said, has been successfully administered through the stomach by making use of some digestion-stopping drug, which permits the vaccine to be absorbed in its normal condition. Efforts have been made with other vaccines, among which is that against typhoid fever. Major Harrison of the British army has conducted an elaborate series of tests in the matter, the first of which, merely swallowing the vaccine, gave no regularly positive results. The next experiments consisted in evading the process of digestion by means of pills of fat and stearine containing bacteria killed by desiccation. It was hoped that the pills might pass undigested into the bowels and there be absorbed. These experiments also have failed to yield regularly positive results.

Dr. J. Arnault Jones, health officer of Aberavon, has taken up cudgels against milk skimmed in a separator, which he says should be labelled, "Unfit for the nourishment of children." He tested fourteen brands of machine-skimmed milk and no one was found to contain more than one part in one hundred of butter fat.

It has been suggested by Dr. W. H. Symonds, health officer of Bath, that some pungent material like cayenne pepper or aloes should be mixed with the gum of postage stamps and adhesive labels to prevent moistening them with the mouth. He takes exception to the many kinds of "label-licking" that are in vogue, and thinks them efficient in communicating disease. He calls attention to the fact that the British Government provides stamp moisteners in all of the principal offices, but states that it seems to be the business of

no one in particular to see that they are in proper order.

The day nursery in English mill towns has been found to be an important factor towards decreasing the infantile mortality, which is always large in such places. The nursery is cleaner and healthier than most workmen's homes and the child is sure of good treatment and a better method of feeding.

A note is going the rounds of the English sanitary journals, although without the authority of any name, that rats get their plague fleas from a marmot that is a host to them, but is immune to the disease. This is an interesting question, and suggests that still another of the rodents is implicated in the ever widening matter of plague distribution.

Dr. Newsholme says that infantile mortality is to-day the most sensitive index to the efficiency of sanitary administration, especially in urban districts.

Dr. Burnet, of Bury, is an advocate of clogs for rainy weather instead of boots. He claims them to be better than boots, which are often inferior in quality and fail to keep the feet dry. The use of clogs even in such cities as Belfast has persisted for rainy day use till within a few years. They are still employed even in this country in certain very wet-underfoot occupations.

A Social Peril.

An article in the Journal of Sociology (Chicago), indicates a certain kind of rooming house as a social peril.

The article, prepared by Sophonisba P. Breckinridge of the University of Chicago, and Edith Abbott, a worker among immigrants, after an exhaustive investigation, refers, not to the much-discussed "red light" districts nor to the "saloon zones," but to those sections in which the "furnished room" business flourishes to the exclusion of nearly every other form of industry.

It is to the dangers to society inherent in furnished rooms themselves and to the added peril to the moral welfare of the community which these furnished room sections have when percolated by vice that the article draws particular attention. The furnished room, it is pointed out, tends always to destroy family life. When to the evils of the furnished room are added the subtle poison of an everywhere present social vice, the article states, family life is bound to become hopelessly tainted and children to grow up into bad citizens

The article points out that families who live in furnished rooms in these sections are nearly all socially on the downgrade and have reached that stage which precedes appealing to charitable organizations for aid.

Most houses given over to furnished rooms are large mansions, decayed, draughty, badly equipped as to plumbing and totally unfit for rooming-house purposes. In order to make the rooming-house as remunerative as possible large rooms of the mansion are cut up into smaller rooms by rough partitions. This in a great many instances destroys the air circulation. Living, sleeping and eating in the same apartment, or even in a suite of three of these improvised rooms produces conditions that breed disease and these conditions are made infinitely worse when there are a dozen or twenty families living under the same circumstances in the same house.

Protecting Public Health.

Scientific work for the prevention of disease has taken its place among the ordinary activities, partly because of the crowding of population in certain centres and partly on account of the discoveries which have led to the conclusion that many forms of disease are preventable and depend upon the degree of municipal cleanliness.

The American Museum of Natural History in New York City has opened a new field for museum work by creating a department of public health, which will be under the direction of Professor Winslow, formerly of the Massachusetts Institute of Technology. This department will work along the lines of bacteriology and municipal sanitation.

One of the objects of the new department will be to keep a comprehensive collection of bacteria for laboratory work. There is no such collection now, American scientists in many instances being compelled to send to Prague for authentic cultures. In this work the museum will be an American bureau for the benefit of colleges and institutions which make a specialty of bacteriology.

In the other branch of the new department it will be the aim of the museum to present public exhibits which will set forth some of the conditions which affect human life in the more populous centers. The most important of these exhibits will deal with the problem of water supply sanitation.

Teaching Soldiers Hygiene.

Hygiene is being taught to the German soldier, says a Berlin correspondent of the Journal of the American Medical Association. Generally the soldiers are instructed from their entrance into service regarding the care of the body. The under officers are instructed once or twice a week by the use of a small pamphlet on hygiene for soldiers, regarding the care of the feet, cleaning the hands, care of the teeth, and these officers give lessons to the recruits. A copy of the book on hygiene is placed in every barrack so that the soldiers may inform themselves in their leisure hours. The privates are especially instructed in the care of the teeth by an assistant surgeon, and it is required that each man shall have a suitable toothbrush.

A Department of Health.

The main points in favor of the establishment of a department of health, devoted to the public welfare as the department of agriculture devotes itself to the farmer's live-stock, are well brought out in the following article by Henry R. Seager, Ph. D., professor of political economy in Columbia University, New York:

"No better proof is needed of the valuable work that might be accomplished by a national department of health than is afforded by what is actually being done by the department of agriculture. Through its experiment stations for acquiring knowledge, and through its bulletins for diffusing knowledge among the farmers of the country, this department is changing agriculture from a merely manual industry into a complex science.

"That there is as much room for improvement in our methods of rearing children as in our methods of raising cattle and pigs, few will deny. That such improvements as may be made in the human field are vastly more important to the nation than those that may be made in the field of animal industry is self-evident. Under these circumstances, the burden of proof that there is some inherent reason why the Federal Government may not do for human beings what it is doing so effectively for plants and animals, appears to rest on those who oppose a nationel department of health.

"But the things that a Federal Government of health might undertake are not matters of conjecture merely. Already in many of its departments and bureaus the Federal Government is concerned with health problems. The war and navy departments are constantly dealing with problems of dietetics and sanitation. The department of commerce and labor, through its immigration bureau, must maintain hospitals, and a corps of medical inspectors in different parts of the country. Even more important is the quarantine service of the treasury department, maintained solely to safeguard the public health. Under the pure food law it is necessary for the Government to have laboratories to determine whether articles of interstate or foreign commerce offered for sale are free from adulterants. The saving of expense and the gain in efficiency that would result from the consolidation of these and other health activities under a single department, would alone justify the change. Organizing health laboratories for experimental work and the publication of health bulletins would follow as a matter of course, and soon the United States might be freed from the reproach of giving more attention, to the health of its live-stock than of its citizens.

"Considering the direction which scientific thought in reference to problems of health and vitality is just now taking, nothing could be more beside the mark than to identify the movement for a national department of health with the so-called 'medical trust.'

"Wise physicians undoubtedly favor the establishment of such a department, but the movement is essentially a layman's movement. It was men like Professor Irving Fisher, president of the committee of one hundred ,whose personal experience has led them to place more confidence in pure air, pure food and rational exercise than in drugs, who first aroused public interest in this question.

"The national department of health, when established, will be, not a department of medicine, but a department of sanitation. Education, not regulation, will be its primary function and only those whose methods or remedies will not stand investigation need feel uneasy at the prospect of its establishment. All honest efforts toward a better understanding of the laws of health must be assisted by the work of such a department."

Medical Inspection and its Consequences.

"Whither?" is a question forcing itself upon our mind whenever new measures are proposed, says the SANITARY REVIEW. Sometimes a very simple reform will open the way for changes of the greatest magnitude, changes which, if their full meaning had been realized at the outset, would scarcely have been dreamt of, much less suggested. When the School Boards were called into existence, many of their supporters imagined the voluntary school would continue its course, and that the Board schools would be enabled to get the fees they imposed without any difficulty. To a large extent their hopes were fulfilled. Yet as the demands of the educationalist and the sanitarian increased, it was evident that but one course could be followed if these new claims were to be met. It was impossible for the denominational schools to attain the standard that was being set up: it was equally difficult for the local rates to bear a greater strain. Therefore the freeing of all elementary schools was the only course open, and the national exchequer was called to bear a greater share of the cost. It was not the goal that some thought of when they started improving the facilities for education—but once the course was entered the end was inevitable. If we turn to other matters, we shall find very much the same sequence of events. But a few years ago strong representations were made in favor of the medical inspection of school children. A few special schools had been established in which it was proved that something could be done for weak and backward children. The teachers were also becoming more conscious of the way in which their work was handicapped because of minor weaknesses, such as defective vision, bad teeth, and throat affections. As a remedy medical inspection was advocated, and in time granted. Now we are beginning to realise "whither" this development is leading. The doctors carry out their inspection, they make their recommendations, but here the matter often ends. It is not that parents will not carry out the directions; in many cases they are unabe to. Nor are they prepared to visit the hospitals, one objection being, apart from the cost and time involved in the journey, that they have an objection to putting their children under the care of students. The "school clinic" is now being tried, and proving more successful. The charges made are moderate, and parents are showing confidence in the scheme. But it cannot stop here. The "inspection" will never be thoroughly effective until the State undertakes the whole burden of cost, and sees the job through to the end. And we would rather that this should be than the half-and-half scheme. If a part of the community—and that part which contributes least——is to have the benefit of free inspection, free doctor, and free education, why should not that larger part, which struggles to pay its way and keep itself respectable, also enjoy the same privileges? Some may say this is rank Socialism, yet the scheme was not inaugurated by Socialists, and those who support it are amongst the most staid of the two political parties. But once we start to interfere between parent and child there seems to be but one climax. We regret it, for parental care and control are better than State interference. The worst of it all is that we do not seem to get a "better product" for all the trouble taken. A few bright specimens are found out, but the average boy and girl of fourteen years is in reality minus the grit and perseverance for which our race is supposed to be renowned.

Conserving Human Health.

The Boston Chamber of Commerce is doing a noteworthy public service in showing up the economic side of disease so that the public can appreciate it. According to its computations Boston's 150,000 wage-earners, with average earnings of $700 a year, lose 12 days a year each, because of illness, and this means an aggregate loss of 6,000 years or $4,200,000 in wealth.

From the standpoint of the individuals directly involved the time wasted does not measure the total loss, by any means. There are doctors' bills and nurses' hire to be taken into account, not infrequently imposing a debt that it takes years to discharge. Landlords, grocers and other tradesmen suffer as a result, and an additional heavy burden is imposed upon charitable organizations.

There is no more important business issue than this question of conserving human health. Having shown their interest in other phases of conservation, like better farming for example, trade organizations may well devote attention to the conservation of health and vitality. There should be an organized crusade against bad housing, faulty sanitation and infectious diseases. The militant warfare against tuberculosis should set an example for vigorous procedure against other maladies some of which society from a false sense of delicacy has not yet had the courage to face and combat in an effective way. This is most deplorable because the effects rest heavily upon the innocent and humanity in general.

The time is at hand when the foes of human health must be attacked as never before by research, popular education and the vigorous co-operation of various social and philanthropic agencies, and all good citizens should lend their influence to the hastening of this work.

Hygiene and Nutrition.

Elmer Lee, A.M., M.D., in the November Medical News discusses "Perfect Nutrition as the Basis for Accurate Therapy." He takes a decided stand against the use of serums. After describing how blood serums are derived from domestic animals which have been "poisoned by frequent injections obtained from diseased animals or human beings," Dr. Lee denounces the injection of blood serums into the human body as "a blind method, meaningless to the patient and a thing of anxiety and doubt to others." He says:

"It is beyond my understanding. The necessity for it has no existence. I never even think of serums as worthy a thought in the most trying cases; never use them any more than if there were not a serum in the world."

Hygiene is held by Dr. Lee as being competent to work all the cures that are possible, and safely, assisted by surgery in exceptional cases. In hygiene, for the betterment of the human body and the cure of sickness, he mentions food, raiment, shelter, ventilation, good housing, work, exercise, mental and physical well being and management, and asserts: "If these avaiable essentials are set in motion by the physician skilled in this line of treatment aliments and diseases may be cured and suffering minimized."

Dr. Lee is also advocating what he calls a "new plan hospital," from which he would exclude serums and discourage the use of drugs and chemicals. He inisists "the employment of nutritive carbonaceous would suffice and satisfy treatment requirements."

He asserts the better plans for treatment are known and perfected and that nature, aided by hygienic management, restores the sick if wisely directed.

He says: "There should be a normal method hospital to prove to such as are interested what this form of treatment is capable of accomplishing. The new hospital can be made a teaching centre for physicians as well as an example in domestic science for laymen. From foundation to roof economic construction and taste should characterize the building. It should stand for elegant, stately, complete, useful simlpicity, even refinement, and, what is more important, be the scene of practical demonstrations of common-sense methods both for the sick and the well. In this plan earnest, sincere, essential, without ostentation, it would be obvious that vivisection, vaccination, inoculation, injection, opsomic soup, typhoid tea, sera or glandular elixirs, as well as other forms of artificial or overscientific practice, are considered of little or no value.

"A working hospital, managed on the plans proposed, general in scope, open and accessible to observation by friend and critic, does not as yet exist," says Dr. Lee. "An institution of this nature, acting along broad lines, closely adhering to nature's ways and intentions, using the delicacies of the table rather than apothecary nostrums or animal serums for its medicines, even

new appeals to many, as it does to me."

Of recent developments in outdoor treatment, he says. "The present sanitaria are approaching excellence in housing, yet in treatment there is excess of the artificial, exaggeration of infection, magnification of germs, waiting, uncertainty, lack of accuracy in diet, forced feeding upon beef, eggs, milk, hardships, prohibitions, too much cold water, raw air, and in the end unsatisfactory results, with very frequent relapse and discouragement both to patient and others concerned."

In a recent trip to Mexico and California the sanataria and tent treatment was examined and studied by Dr. Lee. He admits some cases do well, but asserts many are discouraged and homesick and death is accelerated by loneliness. In many instances, he thinks, sanataria run into boarding houses with a treatment little short of frivolous. The greatest number of these institutions are without appreciation of natural diet, a wise, abundant, delicious variety, with proportion and balance. Beef, milk and raw eggs prevail as a foundation for diet. There is nothing that could be less natural and appropriate, in his view.

Dr. Lee insists, also, that outdoor sleeping in winter is by no means curative, desirable or comfortable. "Young people, who mainly fill the sanataria, can be trained by participation in this regime into acquiescence, even an endurance for a time. yet it is not practical nor convenient at home upon their return and, in the end, unsatisfactory. What normal ingredient is there in cold air that is not in pleasantly warm air under proper ventilation? In cold weather a window raised or lowered admits a thousand times as much outside air as can be used by any pair of lungs. It may be a pleasant experience now and then to take a dip in the ocean, but a basin does better for general use. It is the moderate, temperate, middle course in the uses of nature that fulfills the essential wants of the body."

On the question of stimulants Dr. Lee expresses the conviction that the lack in abundance of favorable and sustaining foods is responsible for the extensive use of mineral waters, drinks, beverages, stimulants, liquors, drugs and tobacco. "No man habitually uses tobacco, liquor and drugs if the body is supplied with ample and wholesome nutrition. Health of body, with contentment of mind, depends on full, natural and acceptable rations. Scanty and imperfect foods produce shriveled cells and weak bodies."

The doctor draws his conclusions in closing his article:

"Prolonged daily use of weak, watery and stale table preparations, badly cooked and soggy vegetables, fried and much roasted meats, gravies, fats and oils clog, corrupt and debauch the human body, cause irritation, congestions, inflammations, suffering, debility and disease.

"Wrong kitchen cooking is the principal destroyer of mankind and the dining table an alter of human sacrifice.

"The waste of human life everywhere is gradual, progressive and appalling, costly and demoralizing.

"Favorable foods in abundance, yet, misunderstood, neglected, rejected or misused, shorten and afflict the life of the human race.

"Sound health is the vital and precious asset of life.

"Life is freely transmitted, but food to sustain and develop it can only be obtained by great, persistent and thoughtful labor. He who will not work and produce shall not eat, and even if he eats what is created by another it will not prosper him.

"Selected plant-grown substance is man's true and fitting food, favorable and suitable, keeping him in clarity of blood, strength of muscle, purity of body, resourceful, patient and cheerful.

"Food articles that are old, shriveled, stale, refrigerated, cured, generally contain decay, poisons and harmful ingredients. The habitual use of such foods gradually and certainly brings derangement, weakness and disease."

Sanitary Money.

Director Rolph, of the United States bureau of printing and engraving has the following to say in regard to the antiseptic treatment of money:

"Our money paper, or in fact any paper, is merely a felt of interlaced fibres, and possesses very little strength, unless the fibres are cemented together with what is known as 'size.' A very good illustration

of paper, which, as it is, will be reduced to a mass of fluff when carried in the pockets for a few days. When properly sized, and made a little more compact by plating or calendering, this soft and easily rubbed material will be made into a good grade of bristol board.

"Now, our paper money has the hardest kind of usage and it would not do for the surface to rub away in the least, for that would obliterate lines that designate its value. So, to make it hard and resisting to wear, it is soaked in a strong solution of glue. To make sure that this glue is the strongest and best, the makers of the paper boil down rawhide scraps and extract the very substance of this tough and lasting material for the size.

"While this glue or animal size, as it is known, is the best possible material for the purpose, and is exclusively used in all the finest papers, it has one defect: it will absorb moisture from the atmosphere, from perspiration in the pockets or any other source, so that it is practically a jelly. When the bacteriologist wishes to propagate germs, he uses a jelly or glue for the purpose, and so our money becomes not only a carrier, but an actual propagating garden for the wily little 'bugs' that are responsible for nearly all of our ills.

"We have long endeavored to find some material that would be as good as animal size for strengthening the paper, and at the same time would not furnish dinner for the pesky bacilli, micrococci, etc., and after considerable experimenting we have succeeded in finding a process that would prevent the size from absorbing water and thereby forming a delectable jelly for the microbe family.

"In fact, we actually put the paper through a process of tanning. Every one knows how readily an animal skin will decompose, but, after being made into leather, will not only keep indefinitely, but greatly increases in resistence to wear. This is because the glue or gelatine therein is made insoluable by means of tannic acid or similar material.

"This is just what we are going to do with the money paper. We are going to make the glue sizing insoluble with special chemicals and produce the same advantages, with the paper as it now is, as tanning gives to a green hide.

"This will not only render the bills antiseptic, but materially increase their life. The process will also enable us to wash the soiled bill with greater ease and thoroughness, as there will not be the same tendency for the paper to go to pieces in the process of laundering, which we are just starting up."

"One baby down," as the fakers say. The government is going to play safe, at any rate. But maybe this excitement over the "bugs" that infest bills has been somewhat unnecessary. One of the experts who have been making investigations on this subject is Dr. John F. Anderson, director of the hygienic laboratory at Twenty-fifth and E street, in Washington. And here is what he has to say on the subject:

"I have been looking into this matter of the number of bacteria on paper money recently and am convinced that an unnecessary excitement has been created in regard to the danger from paper money. In my opinion, it very seldom happens that disease is transmitted from person to person by money. Othewise, practically every cashier in all our banks and all employees in the redemption division of the treasury department would be incapacitated from illness through handling dirty money; but as a matter of common observation, such is not really the case."

After this, no one need have the least hesitancy in accumulating all the bills he can get his hands on. He may have more trouble with the police than with the germs.

Packing Houses.

A. D. Melvin, chief of the bureau of animal industry for the United States, in a recent publication says:

Meat animals are subject to many diseases which impair or destroy the wholesomeness of their meat as human food, but the presence or the effects of disease are not always discernible in the dressed carcass. To detect disease there should be an expert inspection at the time of slaughter.

To protect the people at a point where they are unable to protect themselves, is, generally speaking, the object of meat inspection. Diseased meat is the direct cause of disease in those who eat it. The con-

sumer, being himself unable to determine whether or not the meat he buys is diseased, demands that he be protected by the government from the cupidity or ignorance, or both, of those from whom he buys.

Meat inspection under the law proceeds by logical steps. Meats or meat food products, except those of farmers, retail butchers and other retail dealers cannot be shipped from one state to another or abroad unless they bear the official meat inspection marks. A person or firm desiring to make such shipments must therefore make application to the department for inspection, stating the extent and character of the business expected to be done. The department, as directed by law, sends its experts in sanitation, who look over the plant and make their report with recommendation to the Washington office.

Usually changes are required in sanitation or in facilities for conducting the inspection. The department points out to the applicant the necessary changes, and its requirements are in accordance with broad and well-known principles. It requires that each room used in the ordinary processes be well lighted and ventilated; that ceilings, walls and floors be of such materials as to be easily cleaned, that toilet rooms, urinals and dressing rooms sufficient in number and ample in size be provided and be fitted with modern lavatory accommodations, including running water. toilet paper, soap and towels, such rooms must be entirely separate from the compartments where carcasses are dressed or meats handled. The last mentioned compartments must be so located that odors may not drift in to them from toilet rooms, catch basins, tank rooms, hide cellars, etc. The premises about the plant and belonging to it also come in for attention. The yards, pens, alleys and chutes must be clean, and the common practice of fattening hogs or other animals on the refuse of the slaughter houses is forbidden on the premises, as well as any other use not countenanced by the principles of sanitation. When reports show that the packer has put his plant in proper condition, the bureau assigns an official number to the establishment, details a sufficient number of inspectors to conduct the inspection and business may proceed.

This, however, is not all there is to the sanitation required by the law. A slaughter house gets dirty with great rapidity; like a small boy, it requires constant cleaning. Blood flows in streams, and entrails with their contents must be handled. One day's operation or less, is sufficient to put the plant into such condition as to offend the sensitive eye and nostril and to sicken the weak and unaccustomed stomach. For his own benefit the enterprising packer will keep up a degree of cleanliness, but the bureau requires more. It demands that ceilings and walls shall be frequently cleaned and whitewashed or painted, and that trucks, trays and other receptacles, chutes, platforms, racks, tables and all tools used in moving, handling, cutting, chopping, mixing, canning or other processes be thoroughly cleaned each day they are used. It looks after the workers also and forbids the employment of anyone who has tuberculosis or other communicable disease; it requires that the clothing which comes in contact with the meat shall be of a material that is readily cleaned and that it shall be cleaned each day. This requirement has induced many of the larger packers to establish laundries and provide their workmen with clean outer clothing daily. Personal cleanliness on the part of the workmen is insisted upon, and to such an extent is this carried that some establishments employ professional manicures who daily treat the hands of girls engaged in handling such prodcts as chipped beef.

At present the department encounters little trouble in securing compliance with its requirements at new plants; but, as may well be understood, the first appearance of the new regulations created some consternation. The department did not desire to stop arbitrarily the meat business of the country, but there was much to be done and little time to do it. By maintaining a firm and rational attitude, however, the bureau, has succeeded in permitting business to proceed in accordance with the law and in bringing about a standard of cleanliness that never before prevailed among the slaughtering and meat packing establishments of the country.

Hospital Construction.

Those who are interested in the development of the special equipment and fittings

for hospitals will find the matter pretty well summed up in a recent review of the subject in the International Hospital Record, by Edward F. Stevens, of Boston, Mass., who has been giving particular attention to hospital construction.

The interior problems of the hospital include such construction as will leave no corners nor angles for the lodgement of dirt or germs. Floors must be crackless, walls and doors flush, windows without projections, while the furniture in the way of cabinets should be entirely clear of the walls. For floors, wood is not satisfactory, Oregan pine in narrow widths being the best of all. Oak is open in grain and absorbent and should be avoided. Monolithic floors, with magnesite for a base, have proved moderately successful, but are generally cold to step upon, while terrazzo is very hard and its cement joints are to an extent porous. For operating rooms it has proved to be as inexpensive as anything yet tried. White vitreous tile is also excellent where an absolutely non-absorbent floor is needed, while hard-grained marbles and opalescent glass have also been used. For the wards Mr. Stevens finds nothing more satisfactory than the battleship linoleum, which can be cementel directly to the concrete floor. For the finish Mr. Stevens has devised a base cut away to receive the floor that can be flush with the plastering and eliminate all horizontal surfaces at this point, while the door and window finish can be made also flush with the plaster and the transom bar need be no thicker than the door and transom, themselves. Doors are now made without panels, and if desired can be ornamented by inlay to any desired extent. One important point with reference to the door is that with the increasing use of open-air treatment, whatever style of the door, it should be wide enough to allow for the passage of the bed with ease. In the modern hospital, cabinets, closets, even such things as sinks and washbasins, are now made free of any connection with the wall. This permits cleanliness to an extent that is not possible where fixtures are set as is customary.

Illumination is another important matter in which much improvement is to be seen in the newest hospitals, and in the lighting of the operating room, especially some new devices have been employed, one of which, at the Beverly Hospital, is a group of lamps on a crane which can be swung out over the table and can be set in the most desirable place for the needs of the occasion. The sterilizing hopper has come to be a feature of consequence in the hospital, for the infectious material can be made innocuous before being sent into the sewer of the town.

Editorial

Co-operation in Public Health.

From time to time during recent years, the suggestion of the formation of a Canadian Public Health Association has been bruited about—more or less in a casual way.

However considering the varied sources of these suggestions, from all parts of the Dominion, no further proofs were needed that the idea was growing in the minds of Sanitarians, until finally it took shape in the formation of the Association at Ottawa in October last.

The institution was badly wanted. When we consider the large number of Public Health workers of one kind or other in Canada without the slightest opportunity of conferring with one another, except perhaps by attending congresses in other countries, where they may meet a few of their fellow countrymen, the urgent need of, or even absolute necessity for, a common meeting ground becomes extremely obvious.

We have Public Health problems in Canada to solve, which are unmistakably different from those pertaining in other countries, owing largely to climatic and social conditions peculiar to Canada.

Undoubtedly therefore the benefits accruing from the interchange of ideas among sanitarians actively engaged in solving these Canadian problems, will be decidedly more pronounced than by intercourse with sanitarians who have not the same problems to face.

Of course, this does not in the least imply that it does not benefit any man to broaden his views in general by keeping abreast with all progress made by the world over; it is only desired to lay emphasis upon the great gain to be obtained by having local problems solved by those workers actually engaged in the different parts of Canada on their solution.

Necessarily therefore from such an interchange of ideas, springs at once the chief result, viz., spread of Sanitary Knowledge—and this in the widest sense, not only amongst the active workers (practical sanitarians), but amongst the public, public bodies, associations, and even Government institutions. But this knowledge must be of the very best, and to get this we must bring to bear upon the subject all the views entertained by the many different workers thereon.

Public Health has become, within the last few years, such a tremendous subject with ramifications affecting so many professions, that there is no wonder at the tendency to specialize in the various branches, but like all other specialization of work, the specializers are so apt to look at things from their own standpoint only, and to lose sight of outside views altogether. This is ever to be guarded against and the Canadian Public Health Association, by bringing the specializers together, hopes to have every side-light cast upon the discussion of all matters relating to public health, thus securing the truest solution to these problems, wherein so many different workers are interested or involved.

The Association must therefore embrace all these co-workers, its membership must comprise all those engaged in Public Health in any way: medical men, public health officers, chemists, bacteriologists, architects, plumbers, the public both individually and in associated bodies, and lastly governmental institutions, whether municipal, provincial, or federal.

In this way, and in this way only, can the primary aims and objects of the Association be carried out. Its membership must be open to all, the only qualification, if qualification it may be called, is the evidence of an interest in Public Health work.

The Canadian Public Health Association, therefore, differs in this respect to a marked degree from all other kindred institutions—its doors are open to all—and surely with such an enormous number of workers in Canada there ought to be no lack of support, and the Association should be a very vigorous one. Co-operation is the As-

sociation's watchword, and to bring about this co-operation, it has been decided, first to hold an annual congress in Canada, of three or four days duration, whereat much profitable work will be done; secondly, by means of the monthly Journal to promulgate and spread Sanitary Knowledge.

As the Association grows, undoubtedly local meetings will be held at stated periods throughout the year, where matters of a more urgent nature, and of particular local interest may be discussed.

Tolstoi.

To the many around his bed: "There are millions of people about us, and many of them suffering. Why then are you here?" And to his eldest daughter, Latiana: "Now comes death; that is all!" —Thus, speaking, in his failure to escape from those who would attend him, those whom the wealth of his family and personal devotion brought to his side, in the little log cabin of the station-master at Astopova, on the twentieth of November, last, Tolstoi died; died as he lived—in love with mediocre humanity, the great-hearted champion of simple, ignorant hierarchy-ridden masses among his countrymen.

Count Leo Nikolaevich Tolstoi was born at Yasnaya, Poliana, Russia, on August the twenty-eighth, eighteen twenty-eight, of honored, old and noble family. As a youth he attended the University of Mazan, and at the age of twenty-three entered the army of the Caucasus. Always a close student of social conditions, true patriot, and devotee of the pen, of wide vision and large sympathy, Tolstoi at the close of the Crimean War resigned his commission, more characteristicly to enlist in the struggle for the public good.

Tolstoi became a soldier of the army of rugged truth in a campaign of popular education; a teacher by precept and example. He found time to add to his labors in literature by working out, practically numerous plans for the betterment of the Russian poor. He organized peasant schools on a new and original educational basis, cooperated in the management of cheap popular publications, and years ago—that people, his "fellow-temples of the Universal Spirit of Love," might be benefited —renounced all his property in copyright, lands and money. He believed literaily in the words of Jesus, and held that the only realty of life is the precise living up to the maxims of the Sermon on the Mount.

From the early seventies until his death, Tolstoi was a most prolific writer. "War and Peace," and his masterpiece, "Anna Marenina" were followed by works in all departments of literature, on religious ethical, philosophical, economical, political and social problems; among them, "Krutzer Sonata" and "The Kingdom of God Within Us" "Slavery of our Times," "Christian Teaching," "Resurrection," "The Death of Ivan Ilyitch," "What is Religion" and "The Power of Darkness."

Long before his death Leo Nikolaevich Tolstoi had become as interpreter between a social, ideal, and the elemental emotions of light-seeking man, [illegible] olicitically feared Greek Church excommunicant, of loudly questioned sanity on the one hand and recipient of devotion — little short of worship — on the other, from the thousands embraced by his great insight, sympathy and practical humanity. Tolstoi was feared because he was so loved and because he had early reached personally beyond the power of direct ecclesiastical and state oppression to the protecting friendship of an ultra-Russian literary world.

"Six Hundred and Six."

Syphilis, its name derived from two Greek words meaning hog-loving, was first described as a separate form of veneral disease in 1494, when it prevailed epidemically in the army of Charles VIII. campaigning in Italy. From Italy Syphilis seemed to spread rapidly over every part of Europe, and as the time was immediately subsequent to the discovery of America some investigators blamed its origin on that continent; others saw it coming from Africa. But be its origin, as far as Europe is concerned what it may, Syphilis became known as the scourge of man—the cause of premature death, untold innocent suffering, racial decline, and deformities the most abhorent. For years all that could be said of the disease was that it was communicable by contact, that it presented well defined groups of symptoms at successive stages, and that it might remain dormant

for years and reappear independently of fresh infection. Scarcely any organ or structure of the body claimed exemption from its influence.

The recent invention of what is called the ultra microscope, a contrivance by which the highest powers can be used in conjunction with a dark field illuminated from from above, enabled the definite placing of Syphilis among parasitic diseases; and has shown it to be due to the invasion of the body by a minute protozoon, a spirochæte which has received the name of Treponema pallidum. The parasite is of extreme minuteness, its size expressed in thousandths of a millimetre and its form a colorless transparent thread coiled into a spiral. This discovery of the parasitic character of Syphilis at once threw a flood of light upon its ordinary course and symptoms.

Nevertheless the cure of Syphilis in many cases still presented insurmountable difficulties. Potassium iodide gave some relief and mercury while approaching the specific, often did little more than relieve. The case was analogous to that of ague and the enemy if not wholly overcome were practically certain to renew their attacks at some future time. The search continued for a better weapon.

In this search the Institute of Chemotherapy, at Frankfurt, Germany, under the direction of Professor Ehrlich assisted by his Japanese confrere, Doctor Hata, has been engaged in experimental work upon the curative values of various chemical compounds including parasiticides capable of being safely administered to the human subject. Among other curious results the Institute found that conclusions as to the action of agents thus administered cannot be deduced from their effect on the parasites isolated from the body; it appearing that some preparations fatal to parasites when isolated, expend their forces upon the tissues of the body into which they may be injected leaving the parasites therein untouched. In the case of the spirochæte of Syphilis six hundred and five different preparations were used in experiments before one was discovered that might be regarded as satisfactory. Chemically described as "dioxy-diamido-arseno-benzol," preparation number six hundred and six finally was suggested by Doctor Hata as the possible remedy sought; and Doctor Hata's expectations seem to have been fulfilled.

"Six Hundred and Six" is a yellow powder put up in glass tubes from which the air has been exhausted before being sealed. The powder is administered to patients by subcutaneous or intra-muscular injection, conducted with the strictest antiseptic precautions. One-fifth of the dose that is poisonous to a fowl will suffice to cure one suffering from fowl spirillum fever; and it was found that a single injection caused the complete disappearance of Treponema pallidum from the body of a rabbit which had been innoculated from a syphilitic

Professor Erhlich with praiseworthy caution determined to satisfy himself and his laboratory colleagues as to the safety and efficacy of the new preparation before allowing it to be used elsewhere, except by a few carefully selected persons, for the treatment of Syphilis. Now, however, Professor Erhlich and Docotor Hata have jointly published their report on preparation "Six Hundred and Six" and the book is being translated into the languages of the world.

So, apparently, we have here added to the acquirements of science, a remedy, against perhaps the worst disease, in its dire results afflicting the human race.

Inter Alia.

Human life and health are the greatest commercial assets and should be regarded not only theoretically but practically.

* * *

We have at present too many different bureaus, and conditions are likely not to improve until these bureaus are united under one Federal authoritative department.

Investigations of schoolhouses show that the majority of them are not lighted, heated nor ventilated, according to the logical demands of human life and health as our greatest assets.

* * *

The health officer is the most important of all officers. But we will not and can not secure men whose knowledge and work

will be in accordance with the importance of that position until we pay a salary according to it.

* * *

Yet the governments of our larger cities, with a few exceptions, are more economically administered now than they were ten years ago.

* * *

The difference in expenditures now and then is due to the fact that to-day public money is spent for projects calculated to better the living conditions of urban populations. These projects, which were not thought of ten years ago, are public playgrounds for children, public baths, better sanitary systems, the elimination of grade crossings and other works that tend to prolong human life, improve the health and increase the happiness of people living in cities. These civic betterments, however, necessitate an increase in the cost of municipal governments, but the people are willing to stand the increase when they get for their money things that benefit them.

* * *

Many cities of over 30,000 inhabitants pay more for schools and for police and fire protection than on all other accounts, which shows that the people regard education and public safety as matters of the first importance in municipal administration.

* * *

Cities will continue to prosper proportionately to their use of money in furnishing pure air and sunshine for the homes of the poor as well as laying out parks and boulevards.

* * *

There are two kinds of people in the world, those who carry, and those who are carried, or those who are able and those who are not able. Those who carry cannot shirk the responsibility, and in order to make the unable self-sustained, must see that they are well housed, that the pure air reaches them so they will grow robust and healthy. Then there will not be the great number of dependent people, because now they are defective, physically, morally and mentally.

* * *

A city is a conglomeration of cities. The boy from the small town desires more opportunity to develop, and naturally looks to the city. The foreigners immigrate in large numbers. But they all go to the city that is the best advertised. The lowest death rate and the fewest crimes are the best advertisers and mean that better care is taken in the prevention and spreading of disease.

* * *

Abraham Lincoln once said: "A great nation cannot exist half free and half enslaved," and the same is applicable to disease; we cannot prosper with one-half chained by the slavery of preventable disease and the other half free of disease. We must fight and win from the slavery of preventable disease.

* * *

Moreover, if the thousands now given in charity to help the family of the man killed at his work through neglect of an employer to safeguard his machinery could be given for the prevention of accidents, a stronger, healthier citizenship would result. Prevention strikes at the root of this evil, and this, not charity, is a workingman's right.

* * *

An entirely modern school of laying out streets and open spaces has been started in German cities in the last few years with much success. Radiating avenues and connecting ring boulevards, intersecting one another in monumental squares, triangles or circles, with intervening streets laid out on a gridiron plan, were the former schemes for the development of new sections; ideas, which were previously taken from Baron Haussmann's plans for Paris. The Germans are now going to the old parts of their cities for inspiration, and have tried to reproduce them as far as possible. Modern considerations are combined with these suggestions, and the result is picturesque and charming.

* * *

The houses are not all on the same building line, but are set back from the street line at varying distances. The trees are not on a regular line either, but are planted where the houses are set back, or

in quaint little squares and open spaces occurring at intervals along the streets or at their junctions.

* * *

The German plan has great advantages, as it takes into consideration the irregular lot lines between pieces of property, and it also conforms with the existing topography of the country.

* * *

With the picturesque layout of the streets and their intersections, considerable attention has been given to provide spaces for parks and playgrounds. The playground idea was copied from this continent. The Germans, although hitherto opposed to organized play under guidance, have come to realize that something of this sort will be of material benefit to life in the crowded sections of their cities..

* * *

The housing question is becoming an all-important one. Overcrowding is akin to disease and crime, according to those who have studied the subject thoroughly. These cannot be wiped out until the housing problem is thoroughly studied and better home life provided for the poor.

* * *

In European cities the fight has been to give the child more air in the home, while here an entirely different campaign is carried on by organizing playgrounds for the outdoor enjoyment and exercises of the poor. But in some cases the child is sent back to a dilapidated home where tuberculosis is rampant.

* * *

The chief requirement for the normal growth of a city is not that each of its citizens should possess wealth, but that each should have health and strength. The houses into which the next generation shall be born, and in which it shall grow to manhood, will determine, more than any other factor, whether the cities of the future shall be both fair and great.

John Burns recently said that a mean street makes a mean man. This is true, and it is likewise certain that a child born and bred in a mean, sunless, dirty house will prove an undesirable citizen.

* * *

Lord George Hamilton, chairman of the British Royal Commission of 1909, in summing up the exhaustive work of that body, says: "The serious feature of our report is the deliberate statement that the conditions of life in London and other big towns are such as to produce a degenerate race, morally and physically enfeebled."

* * *

The ultimate realization of "city beautiful" plans depend more upon the passage at the present time of sound building by-laws, with provisions which secure ample sunlight and fresh air in tenement homes, than upon any public promulgation of the advantages of parks and boulevards. The low material ideals which spring from dilapidated houses, unswept streets and garbage strewn alleys will produce low standards of citizenship, public morality and civic beauty.

* * *

Any great awakening for substantial municipal improvement must depend upon creating a sincere dissatisfaction in the minds of the young with bad conditions in the home, the workshop and the office. So long as slums prevail, and congestion increases instead of decreases, so long will preventable diseases and unnecessary sacrifice of life continue.

* * *

If the loss of physical stamina and the resulting inefficiency of the worker were the only influence of bad housing, we should be justified in strenuous efforts to reduce this loss, but the mental depression and the weakening of moral fiber from an environment of dirt and darkness is equally sure.

* * *

It was shown during the recent Town Planning Conference in London, England, that the death rate among people of the same ages is materially lower in the tenement houses of the manufacturing centres which have windows or openings on three

or more sides than in those which are open only on one or two sides, as many of them are. Particularly deadly are the numerous tenement houses which are built back to back with a common wall for both at the rear, and which are often without side openings. Fresh air and sunlight in dwelling houses are absolutely requisite for health.

* * *

The average aldermen or voter has barely begun to appreciate the magnitude and complexity of the problems of health in a modern city. Education is the fundamental need—education as to conditions, dangers, remedies and possibilities.

* * *

And it seems reasonable to say that to improve the health of communities, medical information must be disseminated and that the best way to do this is through classes and groups, such as employees of large stores and manufacturies, the schools and such like, as well as to individuals through the medium of private practice.

* * *

A flourishing trade in spoiled foods has been found in New York. The facts developed by the investigators showed: That an enormous business in purchase and sale of putrid and decomposing eggs known in the jargon of the trade as "rots and spots" exists in New York City. That these eggs are disposed of to bakers and cake manufacturers, who use them in the manufacture of sponge cake, pound cake, lady fingers, and other cake stuff that is yellow hued and made principally of eggs; that this trade has been carried on for years under the tacit permission, if not the active assistance of the men intrusted by the city with the inspection and care of the food of the city.

* * *

The investigation proved that there was not the slightest difficulty in the way of any firm or person who desired to enter upon the business of buying and selling "rots and spots."

* * *

The experience of one firm the subject of investigation, disclosed that not only are the best customers for these horrible eggs the wholesale dealer in bakers' supplies, but the demand was actually far in excess of the supply.

* * *

It has been estimated that fully 1,000 cases of decomposed eggs are disposed of in this way every day in New York City alone.—What are our Canadian cities doing in this regard?

* * *

Long ago the hygienists discovered that those who would have health most, among the other things, separate themselves from their sewage and garbage. Moses, the first hygienist, knew this, and, understanding human nature to the very bottom, he opened his sanitary code with, "Thus saith the Lord." And, indeed, it is the Lord who tells us continually, through invalidism sickness and death, to be clean.

* * *

Moses led the children of Israel through the wilderness for forty years without any outbreak nor epidemic of that filth disease known as typhoid fever. Now whenever the soldiers of "civilized" nations gather together for any length of time typhoid breaks out. In order to keep away typhoid, Moses simply required complete separation of the people from their sewage and garbage. See the Mosiac law. In order to insure having the disease in modern times, military officers permit their soldiers and their sewage and garbage to mix. And we in every town and city of Canada, mix ourselves more or less with our sewage and garbage. The penalty is great.

* * *

God said unto Moses, "Thus shall ye separate the children of Israel from their uncleanness, that they die not in their uncleanness."

* * *

In scores of back yards in all our cities and towns may be found offensive privies, open to rats and flies. There may be found scores of back yards with sodden places caused by slops being thrown upon the surface of the ground. Heaps of garbage and trash and piles of stable manure may also be found. Why all of this filthiness? Do we know better? Do we not know that cleanliness is essential to Godliness, and that a community without a certain amount of Godliness is sure to be de-

stroyed? Do we not know it is true economy to be clean?"

* * *

To spit is not cleanly nor is it one of the liberties of the citizen, though some persons appear to assume that it is. If a man be arrested for spattering a sidewalk, he may speak questioningly of Canadian freedom. Where is the liberty of the citizen, he may wish to know, if one can not spit without subjecting himself to arrest?

* * *

He will make the usual error of confusing liberty with license. Liberty has due regard for the rights of others. Not so license. The spitters have little or no regard for the rights of others. They bespatter the floors of street cars, or if they have a slight sense of shame they may seek out a corner of the car.

* * *

The habit of spitting is disgusting enough to warrant the decency campaign against it. The danger of disease being spread in sputum, however, is the basis of laws against spitting in public places. This danger has been amply demonstrated and confirms good, common sense opinion.

* * *

The Canadian Pacific Railway Company has started an anti-spitting campaign covering its whole system. Especially in country places the waiting-rooms of railway companies are frequently offensive because of the spitting habit. And the Canadian Pacific, among few railway companies, is to be congratulated upon this farther evidence of an advocacy of common decencies and public health.

* * *

The fully matured person may successfully resist other kinds of poison, including poisoned air. But the delicate, immature organism of the child, which exhausts its chief energy in growing, cannot defend itself so well. This makes the subject of schoolhouse ventilation a very important matter.

* * *

A badly ventilated home is injurious enough, but there the members of the family are passing in and out and most of them get occasional draughts of fresh air. The child that sits through the major portion of the day in a close schoolroom, where the oxygen must be divided with a large number of others, is in a much worse condition.

* * *

In some respects our boasts of vast advancement in school architecture must be qualified. The old-fashioned schoolhouse of forty years ago had at least one great advantage. Through its stove-pipe or fireplace it had, in effect, a powerful pump which constantly changed the air of the room. In recent construction we have steam or hot water heat, often with no compensating special contrivance for ventilation.

* * *

Of recent years a great deal of attention has been given to better sanitation and sanitary methods in schools. Sanitary drinking fountains have been installed in many schools, and the old drinking dipper in the school is rapidly being displaced. Sanitary methods of ventilation are also being more practiced. It is coming to be recognized that since the children have to spend nine months of the year in the school house of the country and this for a great many years of their lives, these buildings should be equipped to care for the children in such a way that the danger of contracting disease shall be minimized.

* * *

Educators should be fitted to establish through public schools better practices in hygiene and sanitation, and higher ideals of parenthood.

* * *

The situation in these respects observed in some normal schools is lamentable. They claim to be professional, and have the same humanitarian need to be standardized as have medical schools. Leaders of medicine for many years have worked for this, and have been recently reinforced by the report of the Carnegie foundation.

* * *

It is imperative that normal instruction enable students to pass examinations for licenses to teach. These examinations in

hygiene and sanitation therefore set the pace for instruction. Ninety-three per cent. of their questions in "physiology and hygiene" are in anatomy. Less than seven in a hundred are on healthful living.

* * *

Some normal pupils, and, alas, some children in consequence, can repeat or draw the anatomy of the eye or ear more in detail than the general practitioner of medicine, who is ten years beyond the examination stage; but all three—teachers, children and physicians—will sit through a session in foul air at seventy-five degrees Fahrenheit in December.

* * *

The anatomy of the eye is one of the stock questions of examiners; "describe the course of the circulation" is another. Some students of pedagogy say that the normal work in hygiene and sanitation is often of so little value that they do not take it; but they read a simple textbook that answers the questions usually asked and "get through all right." Medical students have been known to do the same thing.

* * *

Examiners and schools are more at fault than students, and chiefly the examiners—the pacemakers.

* * *

Examining boards, after consulting a superintendent of health and staff of visiting nurses to homes or schools, can present questions and other tests in health methods and principles that will promptly bring normal teaching up to modern needs, and secure for public schools instruction that citizens and parents of the following decade are entitled to have."

* * *

But to dignify school hygiene it must be presented to students as a systematized branch of science. One way of accomplishing this is to make use of certain instruments of precision for demonstration and experiment. These same instruments should urge still more for their obvious value in prosecuting original investigation. It is entirely possible for well-trained students in normal schools and colleges to make contributions of value in school hygiene and sanitation.

* * *

School brigades and Canadian Boy Scouts might well have added to their work and play certain sanitary police duties. It is a matter worth the consideration of leaders of the Boy Scout movement in this country.

* * *

The prompt ventilation of street cars is a matter of prime importance, and the suggestion that boards of health take action regarding it is a good one. The problem can be solved scientifically and practically, without considering the "fresh air crank" on the one hand and the "mollycoddle" on the other.

* * *

Under present conditions, many conductors appear to have no rules nor orders to guide them and usually pay no attention to the matter whatever. If a passenger becomes nauseated by an excess of foul air and asks that a ventilator be opened, the conductor may go along the car and open more than half the ventilators, reducing the temperature below normal and causing great discomfort. The "mollycoddle" then has his innings, with the result that everything is hermetically sealed.

* * *

In railway coaches the ventilators are so guarded with wire netting as to prevent direct drafts, but they keep the air reasonably fresh. This is merely an example of what might be done in ventilating street cars.

* * *

And the condition in lack of ventilation of most telephone booths is disgraceful. Each public booth should have an inlet for fresh air and an outlet for vitated air with a small electric fan to keep up the circulation.

Library, Laboratory & Clinic

Public School Hygiene: The new Ontario Public School Hygiene might well be read by others than public school pupils. The author, Dr. Knight, has put much useful information interestingly in a small space. He points out that cleanliness of body and of home accompany, if they do not always precede cleanliness of soul.

The book gives the plans of a sanitary house, such as should be within reach of the farmer or mechanic of moderate means.

There are chapters on ventilation, milk, water, consumption and its treatment in the home and on other matters of importance.

Sleeping Car Air Analysis: The only available method of accurately estimating the air supply of running cars is by determining the amount of carbonic acid gas which their atmosphere contains, and from this computing the amount of air which enters. The problem is mathematically simple, and rests upon the known amount of carbonic acid thrown off by the respiration. It seems that bad ventilation is in winter, due chiefly to improper control of the heat supply.

This method has been applied in the study of sleeping car ventilation. Some 1,000 samples of air have been analayzed from these cars. It shows that an average of approximately 40,000 cubic feet of air is supplied hourly to the main sleeping compartment of standard cars which are equipped with the ventilating system now in common use by the Pullman Company, and that the amount is rarely, if ever, under 20,000 cubic feet. There are rarely more than twenty people in a sleeping car; hence each person is supplied with some 2,000 cubic feet of air each hour. This applies to the findings in occupied berths, both lower and upper, as well as to the car in which the berths are not made up.

The high wind pressure to which running railway cars were subjected results in fair ventilation, even when they have no special ventilating devices. The amount of air which they receive varies from 15,000 to 50,000 cubic feet per hour, depending upon various conditions.

How to Take Care of the Baby: The experienced nurse does battle for breast milk against the cow's milk whenever it is possible to do so. There is nothing as good as mother's milk, though ignorant young mothers are inclined to believe that the bottled milk is better. A leaflet prepared by the milk commission of Chicago on "How to Take care of the Baby," is printed in seven different languages to meet the needs of foreign citizens. The first lines stare at the reader, "Remember, there is nothing as good for the baby as the mother's milk. If your doctor says you must stop the breast milk, go to a station of the milk commission for properly prepared food. Don't feed anything else unless told to do so by your physician."

These leaflets contain instructions on the whole art of taking care of the baby. If it has been a puzzle before, the young mother may now learn for the first time: "don't handle the baby too much, it is bad for it, don't pick it up every time it cries. Be sure that it gets enough sleep, at least two naps a day. Do not put too much clothing on it. Bathe it in a tub every day. Feed at regular hours, and from the bottle only. Use a clean nipple for each feeding. Use a fresh bottle for each feeding. If the baby cries at other than feeding time, give it cooled boiled water."

Lumsden's Pamphlet: Dr. S. L. Lumsden, who was employed in the Chicago campaign for eradicating typhoid fever, has issued a booklet on the subject, which says in part:

In democratic countries no law can be successfully enacted which does not represent the strong convictions of a strong majority. The people, having the power to appoint the makers and the administrators of the law, are the ultimate ar-

biters of the form of government under which they shall live. Education of the people, taken in a broad sense, is, therefore, essential to advancement in sanitation or disease prevention as in other measures for the uplift of our nation.

"The adage 'Nothing succeeds like success,' is particularly applicable to the work of disease prevention. In these days of publicity a successful fight against a disease in any particular community will be heralded abroad, and may have a wide-spread, even a world-wide educative influence. Among the many brilliant achievements in sanitation within recent years, which have had such influence, a few may be mentioned: The eradication of yellow fever from Havana, Cuba, and New Orleans, La.; the sanitation of the Isthmian Canal zone in Panama; the eradication of bubonic plague from San Francisco, Cal.; the marked reduction in hookworm disease in Porto Rico; and the eradication of typhoid fever from Trier, Germany.

"A successful campaign against one infectious disease in a community educates to a considerable extent the people of that community to an understanding of the feasibility of successful campaigns against other infectious diseases."

Further on in the pamphlet, Dr. Lumsden whispers a word of advice into the ear of politicians who are seeking a safe and sure way of coming back for another term

"Of the widely prevalent infectious diseases," he says, "none promises better results from equivalent amounts of intelligent effort at prevention than does typhoid fever, and in the prevention of this disease, therefore, municipal officers have a great opportunity.

"A candidate for re-election to the mayoralty or city council can point unhesitatingly to his achievements in protecting the health of the people as one excellent reason for his continuance in office. It has been remarked that practical politicians in a municipality usually regard the health office not as a political asset which may be used to advantage in campaigns, but as a grave liability with a great capacity for getting the administration into trouble. This estimate is not necessarily correct, and within recent years it has been realized in a number of instances that the good record of the city health office may be used as one of the winning cards in local campaigns."

In mapping out the health policy which Chicago's government should adopt, Dr. Lumsden says:

"Funds for sanitary improvement should be appropriated as liberally as the taxation rate will permit. There are so many public improvements needed which the funds of the treasury are inadequate to provide that it is, no doubt, very difficult at times for the municipal authorities to determine to what purpose the scanty funds can best be put. Of the conditions affecting the welfare of the whole people of a community, a good sewerage system and a good water supply are certainly among the most vitally important.

"Provide for the collection of mortality and morbidity statistics so that the results of sanitary work may be known. This can be done with very little cost to the municipality. The enactment of an ordinance requiring physicians to report cases of infectious disease, and undertakers to file certificates of causation of death in order to obtain burial permits, will accomplish it.

"Provide for the proper care of the sick. For every case of typhoid fever originating in a municipality the municipality is to a large extent responsble. The patient's bedside is a fountain of infection. There the infection may readily be destroyed, but once allowed to escape from there, it may be disseminated in various ways and become very difficult, or practically impossible, to trace and destroy.

"Keep in close touch with and support the health officer in his work. You fight a common enemy, and unless you have concerted action you cannot expect to wage a successful warfare. When the mayor and city council cannot agree with the health officer on the plan of campaign, it is time either for that mayor and city council or for that health officer to be removed from office."

Woman Health Visitors: What are the principal functions of British women Health Visitors? According to an interesting brochure, on the subject issued by the British National League for Physical Education and Improvement, they may be summed up as follows:—

To advise young mothers.

To follow up the notification of births and visit the homes when doctor and midwife have ceased to attend.

To note conditions of ignorant feeding or of non-supply of sufficient and nourishing food, and to take judicious steps to correct these evils.

To see that foul or long-tubed feeding bottles and dummy teats are not used.

To promote the practice of weighing infants regularly and remind mothers of the simple rules of hygiene in relation to the home and its inmates, and otherwise to assist in preventing the spread of such diseases as measles, whooping cough, etc.

To point out or discuss the propriety of vaccination against smallpox.

To advise or encourage cases of incipient or threatened phthisis to go to sanatoria, and of incurable phthisis to go to infirmaries.

To promote a knowledge of the value of fresh air, of keeping windows open at night, of cleanliness in the home, etc.

To instruct and guide in their work the voluntary district visitors who assist in health visiting.

To note any insanitary or foul condition in any of the homes visited and in any of the inmates of the same, and to report these points to the Medical Officer of Health under whom they work.

To attend at factories during the dinner hour, at mothers' meetings, girls' clubs, and on other suitable occasions, for the purpose of giving talks on the subject to which their qualifications and the objects of their appointment relate.

To keep a systematic record of all cases.

In some cases the duties of school nurse are combined with those of health visitor. In London the health visitors require certain of the following alternative qualifications: (a) duly qualified medical practitioner; (b) three years training in nursing; (c) certified under Midwives Act, 1902; (d) certificate of Royal Sanitary Institute for Health Visitors and School Nurses, or National Health Society. "It is a necessary incident of their employment that they should make themselves the real friends of the people whom they visit . . . to make it clear, in fact, that they are there to help the mother, and not to find fault with her."

Sleeping Sickness: Sir Frederick Treves, in his new book on the Uganda Protectorate, has a striking chapter in which he speaks of the devastation resulting in certain of the following alternative qualificasignificant looking little fly that is the cause of the sleepng sickness. On the shores of the Victoria Nyanza and the islands that abound in it is a perfect paradise, to all appearances, that has been absolutely depopulated by the dread disease. It is a case of fly versus man, and man has been routed all along the line. In that section alone of the coast that belongs to Uganda there have been no fewer than 20,000 deaths from sleeping sickness in the last five years. The fly will drink the blood of a monkey or a rat and, when times are hard, it will condescend to taste that of a crocodile, but the diet it loves above all is the blood of a man. The bite is sharp yet possibly unnoticed, for it leaves no after-irritation of the skin. The capacity for blood of the fly—the glossina palpalis, as it is called—is wonderful. By weighing a number before and after their meal it has been found that the quantity of blood taken up by males is about 130 per cent. of their own weight, while the females are even more voracious, absorbing no less than 200 per cent. of their own weight.

How is the scourage to be stamped out? That is a question that has been occupying able minds for a long time, especially since the appointment of the Entomological Committee (Tropical Africa) rather more than a year ago. The Committee meets four times at least a year at the Colonial Office, the next meeting being arranged for the 27th inst. Between these meetings the work goes on, for there are sub-committees, and day by day evidence is being accumulated by experts who have been sent out on missions of inquiry to Africa. At the present moment Mr. S. A. Neave, is in Nyasaland and Mr. J. J. Simpson in Nigeria. Nor are the investigations confined to the causes of sleeping sickness. The part played by insects in disease is now well understood, and anything relating to this is the subject of minute inquiry and experiment. Apart from the wide-

spread destruction of valuable plant-products by insect pests, it has been proved that many of the most serious maladies, such as plague, yellow fever, and malaria, are disseminated through the agency of biting insects, and recent investigations show that it is the same with the ailments that affect domestic animals. In attempting to deal with insect-borne diseases one of the first essentials is a knowledge of the life histories of the insects concerned, for it is usually in their earlier stages that such insects can be effectively destroyed. It is also of considerable importance to learn the habits and exact distribution of mature insects, and with this end in view a complete organization has been set on foot in order to stimulate the observation and collecting of injurious insects on an extended scale over a considerable area of the African continent. In connection with this work the Committee are issuing a "Bulletin of Entomological Research," which will be available for all who are interested in the subject and who are prepared to help in the good work that is going forward. On the success of that work will largely depend, no doubt, the future development of some of the most interesting regions under British rule.

Open Mail

To the Editor of The Public Health Journal of Canada:

A Corset Advocate.

Sir: I believe that a properly constructed corset gives the woman wearing it the most artistic figure possible for her to have. In most cases of semi-invalidism a rightly made corset will lift its wearer to health and develop her figure to lines of beauty.

Will you permit me therefore to give my fellow readers of The Public Health Journal some rules for hygienic corseting:

The corset must lace up in front.

The front lacing should be planned for flexibility and ready adjustment to the wearer's figure.

Measurements for the corset should be made by a physician.

The fashionable straight front and easy, well made waist will in my opinion produce healthy bodies.

A corset is a splint, and I would not advise a patient to go to an instrument shop and pick out his own splint for a deformed limb.

As the corset is a splint, if the figure it is placed on is the proper shape to begin with, the corset should not change the outside, but sustain it.

A stout woman should have a corset that will distribute her flesh, reduce her hips, flatten her abdomen, and support her. A slight woman should have a corset that will mold her figure to artistic lines and that will prevent displacement of the stomach. Her figure will become rounded by a proper gain in flesh if the digestive organs are not hampered by an improper corset and if a proper diet is selected for her.

The harmful corset is the one that disproportionately narrows the waist and fails to support the body. Such a corset will occasion serious digestive symptoms, and, if persisted in, will produce appendicitis, serious diseases of the stomach, and finally semi-invalidism.

On the other hand, a scientifically fitted corset is a boon to many women; without it they might never become strong, but with it they receive the necessary assistance that enables them to be transformed from unhappy apparitions and hypochondriacs without ambition to healthy women.

Civilized women always have worn corsets, and I believe they always will. The subject is a specially important one to the general practitioner. The present fashion is encouraging. The straight front, which depresses the abdomen, and the upright lines of the waist are good. The points to be remembered are that a physician should order the corset, and that the adjustment should be in front and not behind. The body is solid and bony behind. That is where the rigidity should be. The front of the corset should be so adaptable that it can be laced up any day the way it feels comfortable.

F. H. M.

Conspiracy of Silence.

Sir: Personally, I believe that, next to many present day policies, there is no greater obstacle to real progress in a community than is the "conspiracy of silence" so often maintained. Who is there but could mention any number of conditions in our cities and towns which are wrong,—many of them open violations of law,—which, if corrected, would place each community away in advance of where it is today; but, either carelessly or wilfully, we enter into the "conspiracy of silence" and say nothing; possibly, because we fear that if we said anything, it might hurt our business;—perhaps it might antagonize the interests of some one, whose favor or influence we want, or perhaps, it is because we feel that to speak out would do no good and only make us the objects of criticism.

There is room for a vast amount of improvement in our schools. The remedy for existing evils is publicity. I venture the opinion that if the fathers and mothers

of each community had actual personal knowledge of the conditions which surround their children while in school and realized the danger of such unsanitary environment to the health of these children, many of the evils which now exist would soon be remedied.

In these days of sanitary plumbing, sanitary drinking fountains, saniarty paper towels and with our knowledge of the whole subject of Sanitation, we have no moral right to subject our children to any such conditions as exist in most of our schools.

Many are deplorably and inexcusably ignorant of conditions which exist where they live, and which are wrong and tend to hinder our development and progress as a nation.

FOR PUBLICITY.

Street Car Ventilation

Sir:—The question of street car heating and ventilation is one of the utmost importance and one to which street railways, their conductors and the majority of the people apparently give little o rno consideration.

In the first place, the antiquated method of heating or attempting to heat a car by a stove—usually in the extreme front end—is entirely inadequate. Around the stove it is entirely too warm; the rest of the car is cold. Electric radiators placed between and below each window or under the seats, would insure a uniform heat throughout the car and would also dispense with smoke, danger of fire in case of collision or of being thrown against the stove, if standing, by the sudden starting or stopping of the car.

Concerning ventilation, it should be the conductor's duty to see that his car is properly ventilated at all times. His one idea seems to be a red hot stove or else no fire at all, and in every case all ventilators closed. They get a good deal of fresh air themselves and perhaps are not in a position to judge just how foul the air in a hot, crowded car can become. Fixed ventilators at regular intervals the length of the car roof, such as are used on modern buildings, which could be open all the time, would solve the problem, protect the health of the public and not place them at the mercy of an ignorant or careless conductor, the fresh air crank or the hot air crank either. With every sort of people, with all manner of disease, themselves and many of them coming from infected places, the question of properly heating and ventilating cars is of vital importance and one upon which both the people and boards of health in particular have been silent entirely too long.

A. D. P.

Duties of Towns.

Sir: I am frequently called upon to rectify some unsanitary condition in our towns, and almost invariably am told that a report has been made to the mayor or town health officer, and he has failed to remedy the nuisance complained of.

Undoubtedly our town councils are remiss in their duties as to health matters. They are all in debt, and trying in every way to cut down expenses, but retrenchment at the expense of health is the very poorest kind of business policy.

The management of the health conditions of the towns is entirely in the hands of the town council, and the county health officer can only advise, unless some flagrant violation of the ordinance of the Provincial Board of Health is committed. Many places where food and drinks are sold are yet unscreened, and the people still patronize them.

In one town, I visited last summer, I saw eight nice-looking apple pies, just baked and laid on the counter for sale. They were simply covered with flies. There was no screen on the front door, and what was more suggestive danger, there was no screen on the back door, and an odor arose from the breeding place of the fly too disgusting to mention. I would like to know how many of the ladies of that town buy pies, when they have unexpected guests for dinner, and short notice to prepare a desert for them.

In this same town I went into two unscreened grocery stores, and in each was a large cheese uncovered, with flies walking over the fresh cut surface, planting germs by the million for some unsuspecting fellow to eat with his crackers. In each of these places there were screen doors in front, but for convenience were left open, while there were none on the rear door, and a most "unholy odor" was wafted

in, suggesting the great need of a sanitary officer's work in the back lot.

Another great nuisance and source of danger to us is in the unsanitary closets used by our people. In most of our towns there is no sewerage, and surface closets are used. These can be so arranged, by using galvanized, water tight, buckets, and lime or other disinfectant, and emptied every week, that they will be comparatively safe, and very greatly lessen the danger from typhoid and dysentery.

All of our towns, which have not done so, should pass regulations requiring all places exposing things to be eaten or drunk, to be screened. Water barrels and other storage of water should be prohibited: but above all things they should employ a sanitary officer who will look after these matters which are so important to our well being. If the people do not bestir themselves to look after health conditions on their own premises they will pay for the neglect in some way, sooner or later. It costs less than to keep comfortable during the winter; Why not try it?

H. L. S.

Meetings and Reports

The Canadian Association for the Prevention of Tuberculosis.

In the prefatory note to the tenth annual report of the Canadian Association for the Prevention of Tuberculosis, which is signed by the president, Prof. J. Geo. Adami, and the secretary, Dr. George D. Porter, we learn that the past year has been one of the best in the history of the Association. "Lectures have been delivered in every Province by the Secretary and Lecturers of the Association. Literature has been freely distributed throughout the Dominion. New institutions for the relief and treatment of consumptives have been dedicated in four different Provinces; special tuberculosis dispensaries have been opened, and an increased number of visiting nurses has been employed in the work. More hospital accommodation has been granted to those afflicted with tuberculosis. Exhibits have been shown and many lectures delivered under the auspices of various local societies. Thirty-five new leagues have been organized. Hundreds of columns of newspaper space have been freely devoted to this great educational movement in Canada. Many school children are being taught the simple principles of prevention, and more attention is now being paid to their health than ever before. The Federal Government has doubled its grant to the Association, and local governments and municipalities are awakening to a sense of responsibility, while in a number of cases, private philanthropy has come forward handsomely."

This is a gratifying improvement over the apathy of the past and we extend the Association our hearty congratulations.

A careful study of the report will give authoritative information as to the magnitude of the Tuberculosis problem in Canada, the means of prevention and treatment, and the extent of the agencies at work striving to better conditions.

Dresden Hygiene Exhibition.

Already the advanced notices and invitations are in hand for the International Hygiene Exhibition in Dresden, which will last from May till October next year. The essential preparations of organization, etc., are completed and the important character of the undertaking is evident. It is proposed to have five sections, scientific, historical, popular sports and industry, to whch the world is invited to send exhibits. The popular section will be an enlargement of the special exhibition of "the prevention of infectious diseases," which was first shown at the German City Exhibition in Dresden eight years ago. It will be clearly educational in its setting forth, designed to give to the great mass of people a conception of the nature of the human body with suggestions how every individual should be able under certain circumstances not only to maintain the condition of his health and strength, but also to improve it, and in addition to so arouse the people to a consciousness of the importance of health that they will have interest in legislative measures enacted for the purpose of health protection. The sports section, which will be a setting forth of exercise as related to health, will be housed in a special laboratory and gymnasium according to the very latest improved methods, while the scientific section will be specially cared for in an immense space of nearly four acres. The intention here is to avoid duplication, and exhibit of a single sender will be shown together only by exception when there are particularly cogent reasons for so doing. The result will be a comprehensive view of each particular massed into one group, instead of the usual distribution of kindred objects through the showings of half-a-hundred exhibitors. The managers also, with the same object in view, reserve the right to decline when necessary portions of an exhibit which shall be merely duplicating other exhibits. The exposition is under the care of health officials, Dr. Renk, Health Commissioner, of Dresden, being a manager, while the secretary of the scientific department is Dr. Weber, of the Imperial Board of Health,

Berlin. The growing importance of prevention as affected through the education of the people makes exhibitions like this of the utmost consequence and the Dresden exposition is more ambitious in its plans than any of it predecessors.

United States National Association for the Study and Prevention of Infant Mortality.

At the meeting on November 9, 10 and 11 of the United States National Association for the Study and Prevention of Infant Mortality, it was conclusively shown that of the 200,000 babies who died last year 125,000 might have been saved if the knowledge we now have had been properly used. If the parents had been instructed in the care of the baby this great loss of life could have been prevented. It was also shown that wherever these known principles have been taught to parents and children the death rate has been materially decreased.

The best feature of the convention was the exhibits. One in particular was impressive. One hundred wax baby figures were shown as born on December 31, 1910. Seventy-five of these figures passed into a miniature graveyard where the gravestones were marked with the diseases common to infants, while twenty-five of them lived on to the year 1912.

It was a realistic way of bringing home the fact that seventy-five out of every hundred babies do not withstand the dangers of infantile diseases during the first year of their existence. Another exhibit which made a marked impression on the delegates was a red light, which flashed every ten seconds during the convention. It was marked to show that every time it flashed a baby died, for statistics show that in all the civilized world, an infant dies every ten seconds.

At one session of the convention Dr. Ira S. Wile, a commissioner from New York City, scored the medical schools for their failure to give adequate training in the principle of infant mortality. This statement was vigorously resented by others in the convention, it being argued that the college courses were all right, but that indifference is shown by the student after graduating in keeping in touch with the best thought on the subject and thereby keeping himself posted as to the most scientific methods of treatment.

The convention declared in favor of the most thorough publicity campaigns in connection with the health departments of the various cities, it being agreed that the prevention of infant mortality is more a matter of education than anythng else.

Prominent social workers from all over the United States and Canada, with many of the prominent philanthropists, nurses, health commissioners and milk commissioners attended the convention.

Pan-American Resolutions.

The International Conference of American States, which has been in session at Buenos Ayres, adopted a series of resolutions embodying a plan of international action to be submitted to the various governments. The programme includes these agreements:

Uniformity in consular certificates, to afford better regulation of customs duties.

International copyright, provisions for which were drawn up by the delegates and recommended.

International sanitation, relating to the guarding of infected ports.

Freedom of every nation on the Continent, which builds its own ships to enter the coastwise trade of any other nation.

It is now to be seen how far the various governments will be willing to accede to the programme proposed. The promised grant of freedom for all American shipping in the coastwise trade of the various countries will certainly meet strong opposition. Perhaps in the end, however, diplomacy may devise a means of at least partially adopting the plan. Taken as a whole the conference will undoubtedly prove to have been beneficial. It is a good forerunner for the all-American trade that is to follow the opening of the Panama Canal. The benefits of enlarged commerce will be mutual.

Eugenics Education Society, of England.

A report on poor law reform has recently been issued by the Eugenics Educational Society, of England. The committee which prepared this report contends that pauperism is largely hereditary, and that its cure can be found only in measures that will effectually prevent chronic parasites from reproducing their kind. The members

started upon their study with the assumption that the pauper is a normal person made necessitous by circumstances, but were forced to the conclusion that "in a large proportion of cases he is a person born without manly independence and unable to do a normal day's work, however, frequently it is offered to him." Educational and reformatory treatment of the chronic pauper class is hopeless. Elimination is the thing to be aimed at.

The common characteristics of the chronic pauper class as set forth in the report are as follows: "First is the tendency of one pauper family to intermarry with other pauper families. Second, the proportion of paupers in each successive generation indicates that pauperism is due to inherent defects, which are hereditarily transmitted. Third, the paupers examined by the committee were characterized by some obvious vice or defect, such as drunkenness, theft, persistent laziness, a tubercular diathesis, mental deficiency, deliberate moral obliquity, or general weakness of character. Fourth, there is a class of persons, continuing from one generation to another, who will not make any attempt to work or to continue in work so long as charitable funds, even of small amounts, are forthcoming. Fifth, there is some reason to believe that illegitimacy may tend to run in families."

United States National Education Association.

At the late conference of the United States National Education Association it was declared that too much time was given to a superficial examination of plant and bug life, when through the study of biology the pupils would much better be learning about hygiene and how to keep the schoolroom fresh and wholesome.

Dr. Helen C. Putnam, of the American Association for Study and Prevention of Infant Mortality, inveighed particularly against the ordinary janitor of school buildings. She maintained that tuberculosis was the occupational disease of school teachers and that the germs of the disease were frequently acquired by pupils on account of lack of ventilation in schoolrooms, which were taken care of by men too ignorant in many instances to know the fire rudiments of sanitation. The remedy which she suggested was a more efficient janitor and in many cases a more careful study of the question by principals of schools and by supervisors.

Y. M. C. A. Health League.

A health league, with a minimum of 10,000 members, its object to fight disease and ill health by promoting physical culture and a knowledge of beneficial athletics in districts where such things are unknown, is the latest movement to be launched by the Young Men's Christian Associations of North America.

Dr. George J. Fisher, secretary of the physical department of the international Y. M. C. A. committee, is the originator and sponsor for this movement, and presented the idea at the meeting of the Physical Directors' Society of the Y. M. C. A. of N. A., recently held at Toronto. By an unanimous vote the idea was adopted and an immediate start in pushing the movement was recommended.

The movement is to be world-wide and will not be confined to locations where there are branches of the Y. M. C. A., but to all parts, regardless of whether they support a local branch or not. The idea is to make the movement democratic and give all present members of the Y. M. C. A. a chance to help toward boosting it. The men in charge of establishing the league figure that several rich men, philanthropically inclined, could be induced to donate the necessary $10,000, but if this should not materialize an assessment of $1 will be levied on all members who care to help. So certain of success are the leaders that they believe that within a few months 25,000 members will be enrolled.

The fight will be carried on in factories, shops, homes and any other places where it will do the most good. It is proposed that during the noon hour lectures be given the men and women in the factories on health and hygiene. The lectures will also be illustrated with films and slides.

The advisory committee will consist of fifty members. To this committee will be referred all matters pertaining to the policy of the league. This committee will be formed by the appointment of one member from each state and province, who shall be

appointed by the state and provincial committees of the association. The Physical Directors' Society and the training schools will also be represented. There will be two departments—the department of health education and the service department.

Headquarters have been established at 124 East Twenty-eight street, New York. If the necessary $10,000 cannot be raised within a reasonable time, all money sent in will be refunded. The league is trying to have things started on a safe basis by January.

Health and Efficiency League of America.

The Health and Efficiency League of America has issued an interesting prospectus, setting forth its aims and methods. This organization, which was formed in 1909, is founded on the simple principle that the fundamental basis of efficiency is sound physical health. The general purpose is to increase national efficiency through the cult of individual health. The aims are threefold: First, to prevent disease due to incorrect personal habits. These produce fully three-fourths of the annual death roll. Second, to prevent chronic invalidism. Third, to promote all agencies, public and private, which tend to produce vigor, longevity and personal efficiency.

The means by which it is hoped that these ends will be accomplished are:

First—the dissemination of literature as to prevalence, character and cause of preventable disease, including information as to the diseases of occupation, as to pernicious personal habits, etc.

Second—The discussion of correct modes of living—habits and regimen, and the best means of adapting a civilized environment to natural human needs.

Third—the discussion of information relating to pure foods and the laws and investigations relative thereto, and the results of scientific research in the field of hygiene.

Fourth—The keeping of members of the league in touch with the best books and articles on the preservation of health and efficiency.

Fifth—The exposure of "fads" and "fake propositions," where accurate investigation makes it possible.

Sixth—The creation of public sentiment in favor of hygienic legislation.

Seventh—The stimulus from association of people of like purposes in an organization.

The president is Horace Fletcher, the chairman of the executive committee is Professor Irving Fisher, the headquarters are at Battle Creek, Mich.

The need of an organized campaign against preventable disease in the United States is forcefully shown by the following exhibit of "vital facts" taken from the League's prospectus:

In the United States 3,000,000 persons are seriously ill all the time, most of them needlessly. This means an economic loss to the country every year of $1,500,000,000.

One hundred and fifty thousand people die every year from tuberculosis; 112,500 of these could either rid themselves of the disease or prevent it entirely by means which lie within their grasp.

During the last thirty years heart disease has increased 57 per cent. Apoplexy has increased 84 per cent. Disease of the kidneys has increased 131 per cent. The death rate from chronic diseases has doubled.

Seventy-five thousand people die of cancer in the United States annually. One out of every eight of the adult women now living in the United States will die of cancer.

Every man in the United States loses on an average ten days a year on account of unnecessary sickness

It is possible for every man to improve his health and as a result increase his efficiency 100 per cent. by adherence to the principle of correct living.

Postscript

Commencing with the issue of January, 1911, we shall publish a series of Special Articles on Dentistry as a factor in Public Health, prepared by Members of the Canadian Oral Prophylactic and Canadian Public Health Association, as follows:—

1. Present-day condition of human teeth.
2. Effect on general health.
3. What is being done for it.
4. What methods should be adopted by the dentist.
5. What methods should be adopted by the patient.
6. What methods should be adopted by the physician.
7. What methods should be adopted by the board of health.
8. What methods should be adopted by the boards of education.
9. What methods should be adopted by Provincial authorities.
10. What methods should be adopted by the Dominion authorities.
11. Pain of dental origin.
12. Value of temporary teeth.
13. Pyorrhea.
14. Alveolar Abscess.
15. Description of the average unclean mouth.
16. Mastication.
17. The septic mouth and infectious diseases.
18. Facial deformities of dental origin.
19. Dental treatment of fractures.
20. Description of erroneous diagnosis in the mouth.

Each issue will also be replete with additional material, of interest, furnished by leaders in progressive thinking and doing,—by those in touch with Governments and their Commissions, the Schools and Research Societies, and by trained observers of international affairs.

We shall thus place before the reader, salient features characterizing modern methods of protecting fundamental resources. And while endeavoring, step by step, to effect a greater appreciation of the currents contributing to national and personal progress, our aim shall be to combine in the Public Health Journal the qualities pertaining to scientific investigation with the best features of a purely literary magazine.

* * *

Public Health and the Conservation Movement, was the subject of an excellent paper read before the tenth annual conference of the New York State Health Department by Dr. Charles A. Hodgetts, medical advisor to the Canadian Federal Commission of Conservation, on the sixteenth of last month.

* * *

Coarser Diet and Better Teeth is the watchword of Dr. Herman Schmitz in his school work at West Hartlepool, Eng-

TYREE'S

Antiseptic Powder

The Douche Powder par Excellence

QUICK SURE POWERFUL

Scientifically prepared to do the work for which it is intended and which it does in a manner not to be surpassed, if equalled by any other preparation. Composed only of ingredients guaranteed to be absolutely pure. Does not injure when applied to the most delicate surface. Can be used without danger in any case where a germicide is required, because it is strictly non-poisonous.

IDEAL FOR PHYSICIAN'S USE

Medical practitioners can not do better than recommend Tyree's Powder in every case which calls for antiseptic treatment, thereby eliminating all danger to the patients and assuring their rapid recovery.

A PUBLIC NECESSITY

Every reader of The Public Health Journal should insist upon Tyree's Antiseptic Powder when in need of a germicide. By so doing you take no chance of serious complications. Should be used in all cases of skin disease, infected conditions of the genito-urinary organs, inflammation of the bladder, eczema, abscesses, burns, etc.

Send for free sample and our little booklet

J. S. TYREE,
Chemist **Washington, D.C.**

Phone North 3466

WARM UP TO OUR FIRE PLACES AND MANTELS.

WE GUARANTEE SATISFACTION.

Toronto Mantel & Tile Co.

MANTELS, GRATES, TILES and FIRE PLACE FITTINGS. FLOOR and WALL TILING.

660 Yonge St. - TORONTO

land, where on examination he has found one-quarter of the children with defective teeth.

* * *

Dr. O. I. Grain, M. P. P., health officer for Selkirk, Manitoba, is the author of a resolution of the Selkirk Board of Trade deploring the risk to the people in the lower Red River valley from the uncontrolled dumping of Winnipeg sewage and protesting against such desposal in the Red River without treatment. Besides the danger to human life, the resolution points out the risk to 60,000,000 young white fish annually discharged from the hatchery at Selkirk.

* * *

Reports From the Vacation Colonies of Continental Europe are coming in, testifying to the strength of the open-air movement abroad. A single colony, that of L'Espoir of Geneva, consisted of 338 children, who were cared for, for nearly two months at Jorat, among the Jura Mountains.

Sanitary "Beaver Brand" Hardwood Flooring and Floor Finishes

BEAVER FLOORING BRAND
TRADE MARK REGISTERED

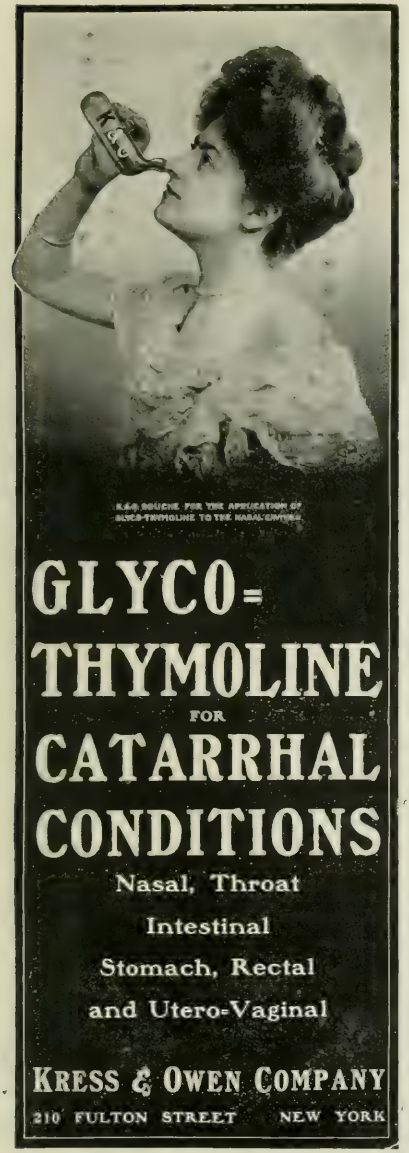
Send for *the most complete catalogue,* dealing with Hardwood Flooring, and Floor Finishes, *ever published.* It contains facts you should know.

Do not fail to secure a copy and order early as supply is limited; and this catalogue can be had only from the publishers.

THE SEAMAN KENT CO., Limited

Factories---Meaford, Ont.; Fort William, Ont.

Sales Offices---Toronto, Ont.; Montreal, P.Q.



ONTARIO

DEPARTMENT OF EDUCATION

Official Calendar
For the Year 1911.

January

1. New Year's Day [Sunday].

2. By-laws for establishing and withdrawal of union of municipalities for High School purposes to take effect. [*1st January*].

3. High, Public and Separate Schools open. [*3rd day of January*].

4. Provincial Normal Schools open [Second term]. [*Subject to appointment*].

   First meeting of Rural School Trustees. [*Wednesday following the annual meeting*].

   Polling day for trustees in Public and Separate Schools. [*1st Wednesday in January*].

5. Truant Officers' Reports to Department, due. [*Not later than 5th of January*].

   First meeting of Municipal Boards of Education. [*Thursday after first Monday in January*].

7. Principals of High Schools and Collegiate Institutes to forward list of teachers, etc. [*Not later than 7th January*].

9. Appointment of High School Trustees by Municipal Councils other than County. [*2nd Monday in January*].

   Annual meeting of Rural Municipal Public Library Associations. [*2nd Monday in January*].

10. Clerks of Municipalities to be notified by Separate School supporters of their withdrawal. [*Before 2nd Wednesday in January*].

14. Annual Reports of Boards in cities and towns to Department, due. [*Before 15th of January*].

    Secretaries of Rural School Boards to notify Inspectors and Municipal Clerk of names and post office address of Trustees and Teachers. [*Before 15th January*].

14. Trustees' Annual Reports to Inspectors, due. [*On or before 15th of January*].

    Annual Reports of Kindergarten attendance to Department, due. [*Not later than 15th January*].

    Annual Reports of Separate Schools, due. [*On or before 15th January*].

    Annual Reports from High School Boards, to Department, due. [*On or before 15th day of January*].

18. First Meeting of Public School Boards in cities, towns and incorporated villages. [*3rd Wednesday in January*].

24. Appointment of High School Trustees by County Councils. [*4th Tuesday in January*].

February:

1. Inspectors Annual Reports to Department, due. [*On or before 1st February*].

   First meeting of High School Boards and Union Boards of Education. [*1st Wednesday in February*].

   Rural Board of Trustees may appoint Truant Officer if Township Council neglects to. [*Council to appoint before 1st February*].

15. Public Library Board to Submit estimate to Municipal Council of several sums required. [*On or before 15th February*].

Continued Next Issue

Special Tuberculin Offer

The value of Tuberculin as a diagnostic test for tuberculosis is generally recognized. We prepare

TUBERCULIN OINTMENT for the cutaneous test
TUBERCULIN, OLD, in capillary tubes for the von Pirquet Test
TUBERCULIN, OLD, for the subcutaneous test

The concensus of opinion appears to be that:

"The von Pirquet Cutaneous Test is the most suitable method for general use, and is absolutely harmless. It is the only test required for children, because a positive result is more significant of a recent infection and occurs less often in apparent health under the age of twelve. Other methods may be needed in adults to confirm the result of a cutaneous test, but it can be applied as a preliminary method in all cases with advantage."

Journal American Medical Association, January 22, 1910, Folio 261.

Correspondence with many clinicians leads us to believe that for therapeutic use Bacillen Emulsion or Bouillon Filtrate are preferable.

We make the following

Special Tuberculin Offer

On receipt of **$2.00** with name of your druggist we will forward, charges prepaid,

	Regular Prices
1 Tuberculin and Bacterial Vaccine Syringe	**$2.00**
1 Bottle (8 c.c.) Serial Dilution, No. 1, Bacillen Emulsion Containing 1-10,000 milligram in each 2 minims.	**50**
1 Package von Pirquet Cutaneous Tuberculin Test (10 tubes Tuberculin, "Old"), 10 tests	**1.00**
1 Aseptic Tuberculin and Vaccine Scarifier	**25**
including Working Bulletins on Tuberculins, Bacterins, Typho-Bacterin and Neisser-Bacterin.	**$3.75**

H. K. Mulford Company
Philadelphia

New York Chicago St. Louis Atlanta Kansas City Minneapolis San Francisco Toronto Seattle

Dr. Charles Sheard, of Toronto, Ontario, was elected a member of the Royal Sanitary Institute at the recent annual meeting.

* * *

"Fear Not": Are you afraid of catching consumption, typhoid fever, and such like? Prof. Elie Metchnikoff, of Paris, France, does not fear even that most terrible of contagious diseases—cholera.

The people of Paris were wrought up over the nearness of cholera, and they went to the scientists with their fears.

"Nobody need have cholera who does not want to," they were told. "Keep clean, boil your water before using it for drinking or cooking, boil your vegetables and fruit, don't be afraid, and there is no danger."

Then Metchnikoff told a little story from the Orient.

"A pilgrim was on his way to Mecca from his home in Smyrna, and on his way he met the Plague. 'How many victims will you make in Smyrna?' asked the pilgrim. 'Two thousand,' said the Plague, 'neither more nor less.'

"On his way back from Mecca the pilgrim met the Plague again. 'How many died in Smyrna?' was the question. 'Four thousand,' said the Plague. 'But you told me you would only carry off two thousand.' said the pilgrim. 'And I told the truth,' said the Plague, 'I killed two thousand. The others died of fear.' "

* * *

An Ideal Husband is patient, even with a nagging wife, for he knows she needs help; and maybe visa versa.

* * *

Impure Milk: If milk contains sediment, it is unfit for use.

If milk sours quickly, it is probably full of bacteria.

If milk keeps sweet a long time, it probably contains formaldehyde.

Milk, to be pure, should be free from shreds. Shreds in milk indicate a diseased cow.

Milk containing bits of dirt and hairs should be refused.

Gelatine in milk can be detected by a peculiar "sickish" taste.

McGILL UNIVERSITY

DIPLOMA OF PUBLIC HEALTH for Medical Officers and others engaged in special work of a Public Health Nature. Courses of Instruction (leading to the qualification) begin Oct. 3rd. For full particulars apply to the Registrar of the Faculty of Medicine, McGill University, Montreal.

These trade-mark crisscross lines on every package

SPECIAL DIETETIC FOOD

Flour for cases of KIDNEY AND LIVER TROUBLES REQUIRING RATHER STRICT DIET

Unlike other goods. Ask your physician. Leading grocers. For book or sample, write

FARWELL & RHINES, Watertown, N.Y., U. S. A.

The Secret's in the fan.

The Invincible JUNIOR

Best for the Home. Cleans everything.

No need to remove anything.

May we demonstrate to you.

The Invincible Renovator Mfg. Co.

Limited, 415 Yonge St. TORONTO

LISTERINE is a powerful, non-toxic antiseptic. It is a saturated solution of boric acid, reinforced by the antiseptic properties of ozoniferous oils. It is unirritating, even when applied to the most delicate tissue. It does not coagulate serous albumen. It is particularly useful in the abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

There is no possibility of poisonous effect through the absorption of Listerine.

Listerine Dermatic Soap is a bland, unirratating and remarkably efficient soap.

The important functions which the skin performs in the maintenance of the personal health may easily be impaired by the use of an impure soap, or by one containing insoluble matter which tends to close the pores of the skin, and thus defeats the object of the emunctories; indeed, skin diseases may be induced, and existing disease greatly aggravated by the use of an impure or irritating soap. When it is to be used in cleansing a cutaneous surface affected by disease, it is doubly important that a pure soap be selected, hence Listerine Dermatic Soap will prove an effective adjuvant in the general treatment prescribed for the relief of various cutaneous diseases.

"The Inhibitory Action of Listerine," a 128-page pamphlet descriptive of the antiseptic and indicating its utility in medical, surgical and dental practice, may be had upon application to the manufacturers, Lambert Pharmacal Co., Saint Louis, Missouri but the best advertisement of Listerine is..... .....

LISTERINE

KRESO

An Ideal Disinfectant, Germicide, Deodorant,
Antiseptic and Parasiticide
For Hospitals, Veterinary and Domestic Use

Write for Descriptive Booklet

Parke, Davis & Co.

Manufacturing Chemists and Biologists,

WALKERVILLE, ONTARIO

Eastern Depot, 378 St. Paul Street, MONTREAL; QUE.

"Sweet Babee" Nursing Bottle: No more sour bottles and sickness if a "Sweet Babee" Nursing Bottle be used. It is the only nursing bottle without a neck; needs no funnel to fill nor brush to clean the inside, which is wiped out like a tumbler. The shape of the rubber nipple beautifies baby's mouth. It is yielding but will not collapse, and is made in one piece without crack or seam. It is easily turned inside out to clean. It is also very useful at weaning time, because the nipple is designed and shaped so much like mother's breast that baby will go from one to the other without noticing the difference. The "Sweet Babee" Nursing Bottle is used and endorsed by every childrens' hospital and is pronounced by physicians and nurses to be a perfect, ideal, sanitary nursing bottle. Milk is such a sticky substance that it requires hand washing to clean a nursing bottle thoroughly on inside, as well as the nipple. The "Sweet Babee" Nursing Bottle without a neck and with the large opening in nipple may be easily washed on the inside doing away with all sourness, which cannot be done with a small neck nursing bottle. Sickness is brought on to a good many babies by not having their bottles and nipples thoroughly washed. The "Sweet Babee" Nursing Bottle will fit any sterlizer case. It makes an ideal drinking glass, and may be used for measuring. Extra bottles and nipples can be procured from druggists. Otto T. E. Veit of 28-30 Wellington St. W., Toronto, Canada, is Canadian agent.

* * *

Children's Teeth. It is calculated that 99 per cent. of the children who leave school at 14 years of age have carious teeth, and that the average number of such teeth in each child's mouth at that age is six! All this could be avoided by a little preventive dentistry between 8 and 9 years of age, with the result that the people as a whole would have better digestion, and the efficiency of the units of the State would thereby be greatly increased. If parents would see to these things themselves, it would be well, but experience shows that they don't bother till the child has toothache, and then it is too late.

THE ONLY FACTORY OF ITS KIND IN CANADA

MANUFACTURING

Trusses, Elastic Stockings, Suspensories, Shoulder Braces, Supporters, Chamois Vests, Crutches, Splints, Rubber Sundries

The Ottawa Truss & Surgical M'f'g Co., Limited,

OTTAWA, - CANADA

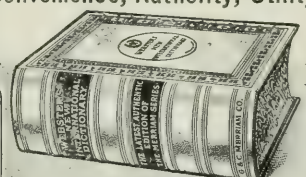
New from Cover to Cover

WEBSTER'S NEW INTERNATIONAL DICTIONARY

JUST ISSUED. Ed. in Chief, Dr. W. T. Harris, former U. S. Com. of Education. ☞ General Information Practically Doubled. ☞ Divided Page; Important Words Above, Less Important Below. ☞ Contains More Information of Interest to More People Than Any Other Dictionary.

2700 PAGES. 6000 ILLUSTRATIONS. 400,000 WORDS AND PHRASES.

GET THE BEST in Scholarship, Convenience, Authority, Utility.



Write for Specimen Pages to

C. & C. MERRIAM CO., SPRINGFIELD, MASS.

You will do us a favor to mention this publication.

YOU WILL FIND THE

ELECTRIC VEHICLE

PERFORMS MOST ADMIRABLY UNDER ADVERSE CONDITIONS.
FOR CITY AND SURBURBAN USE IT IS UNEQUALLED.
OUR EXPERTS ARE AT YOUR SERVICE IF YOU CONTEMPLATE PURCHASING AN ELECTRIC AUTO.

PHONE MAIN 3975 OR CALL AT THE "ELECTRIC BUILDING."

TORONTO ELECTRIC LIGHT CO.
LIMITED

12 ADELAIDE ST. EAST - - TORONTO, CAN.

FOUNDED 1797

NORWICH UNION FIRE
Insurance Society
Limited

of

NORWICH, ENGLAND

Head Office for Canada
12-14 Wellington Street, East Toronto

John B. Laidlaw
MANAGER

A. H. RODGERS, Branch Secretary

$100,000,000 Paid for Losses

The purpose of infectious hospitals is to secure isolation of patients suffering from infectious disease, so as to protect the general community. It is therefore equitable that the community should bear the cost of such hospitals, and the maintenance of patients while in such hospitals.

* * *

The greatest responsibility that rests on the church is to see absolutely that we have no ignorant people.

The pace that kills is not necessarily such if one lives right. The "new man" will live longer than the man of yesterday.

* * *

The Nobel Prize for Medicine: This year's Nobel Prize for Medicine has been awarded to Professor Albrecht Kossel, the physiologist of Heidelber. The prize will amount on this occasion to 193,360f., about $39,000.

* * *

That Fee: Don't cheat the doctor out of his fee; the undertaker will charge more to bury than the doctor will to care, says the Chicago Bulletin of Health.

Reasons For Buying Bonds

1—They afford, when properly selected, ample security.

2—Several different classes are available, the investor being able to suit his individual needs.

3—The interest on them varies from 4 to 6 per annum, payable half yearly.

4—They have a ready market and may be promptly sold if funds are required for other purposes.

5—The bonds we offer are the obligations of Municipalities and Corporations having assets of value many times exceeding their bond indebtedness.

Corporation Bonds yield 5% to 6%
Municipal Bonds yield 4% to 5%

A. E. AMES & CO., LIMITED
Investment Bankers
7-9 KING ST. EAST, TORONTO

¶ Let us look after your typewriter requirements. We do it right. Everything in office supplies.

¶ You can find us anywhere in Canada—Toronto at

7 ADELAIDE STREET EAST

United Typewriter Co., Limited
Main 7834

Your

Accounts Collected

After all others fail
On the basis of
"No Collection No charge"

WHITNEY LAW CORPORATION

523-4 Traders Bank Building
TORONTO - CANADA

We make collections at a Minimum Cost
ASK FOR OUR TERMS.

WHAT'S IN A NAME?

"SANORTO"

For instance is the Trade Name of a Composition used for Flooring

**HALLS, KITCHENS,
ROTUNDAS,
BATHROOMS,
VERANDAHS, Etc.**

Also for Dadoes, Wainscoting and Centre Pieces. Used in Churches and Public Buildings.

It is made in different designs. It is durable and noiseless. Water and fireproof.

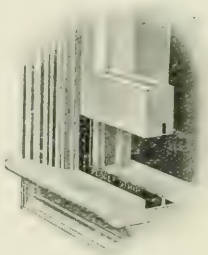
QUOTATIONS READILY GIVEN

THE

Sanitary Floor Company

544-546 King Street West, TORONTO

"THE PEACE PATENT"
Metal Weather Strips
WIND AND DUST PROOF



Last Lifetime

Weather Strips for all kinds of Windows and Doors.

Made in
ZINC,
BRASS
COPPER
or BRONZE

WILLIAM PEACE CO., Limited
Hamilton, - Ontario
TORONTO MANAGER:
JAMES EVERETT
140 Beaconsfield Ave. - Toronto
Phone Parkdale 2148

TORONTO FREE CONSUMPTIVE HOSPITAL
(ON THE HUMBER, NEAR WESTON)
SUPPORTED BY VOLUNTARY GIFTS

When Making Your Will
Remember the

Toronto Free Hospital for Consumptives

The following form will serve:

I give, devise and bequeath to the Toronto Free Hospital for Consumptives the sum of $ .....

Further particulars may be had by addressing Secretary, 347 King St. West, Toronto, Canada. Phone Main 2936.

The Sweet Babee Nursing Bottle

Easily washed on inside by the hand.

Sweet Babee Nipple prevents Colic.

Pronounced by the best doctors and nurses to be perfect, ideal, sanitary nursing bottle.

The Yankee Co., Utica, N.Y., U.S.A.
Rep. **Otto T.E.Veit.** Toronto, Ont.
28-30 Wellington St. West
Phone Main 2592
Samples and Literature sent upon application.

Fletcherism: 1. Wait for a true, earnest appetite.

2. Select from the food available that which appeals most to appetite, and in the order called for by appetite.

3. Get all the good taste there is in the food out of it in the mouth, and swallow only when it practically "swallows itself."

4. Enjoy the good taste for all it is worth, and do not allow any depressing or diverting feeling to intrude upon the ceremony.

5. Wait, take and enjoy as much as possible; nature will do the rest.

* * *

Unclean Oysters: Oysters among which pieces of ice are floating should not be purchased. Not only does the melted ice add to the bulk and also the dealer's profit, but it may be the source of infection, even if the oysters themselves are wholesome.

Investigation has shown that many growers still "float" oysters in water polluted by sewage. They are gathered in many cases by unclean men using unclean methods, unclean ice is added before shipment and also during shipment when the oysters are packed in open containers. Many contain colon bacilli to a dangerous degree.

* * *

Lieut. Colonel Geo. S. Rennie, president of the Organization of Military Surgeons of Canada was in attendance at the nineteenth annual convention of the Association of Military Surgeons of the United States held recently in Richmond, lending his experience to the discussion of military and marine hospital health matters.

* * *

Airgrams: The best disinfectant is sunshine and air; it has not been patented.

Foul air brings about a condition of the body that makes a person an easy prey for disease.

An air that is free from circulation is not a healthy air. If we are to have a diminution of bad-air diseases we must have more perfection in the air supply.

Persons who wear mufflers are those who have acquired the luxury of colds. Cold air strikes the back of their necks and a cold follows.

The
Canadian Casualty
and
Boiler Insurance
Company

¶ Accident and Health Insurance. Liberal contracts issued. Full particulars on application. :: ::

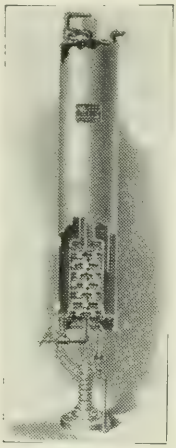
C. Norie-Miller, Manager

The Physicians' Utopia Policy

of the General Accident Assurance Co. of Canada is the most liberal policy issued to physicians and surgeons. Among the many liberal features, double indemnity is payable for Septicaemia or private vehicle accidents. :: ::

Write or telephone Main 6941 for full particulars.

President, Peleg Howland, Esq.
Vice-President, D. R. Wilkie, Esq.
Manager for Canada, C. Norie-Miller, Esq.



THE

ELECTRIC WELD

Combination
Boiler Gas and Water Heater

IS

AUTOMATIC, DUSTLESS, ASHLESS, ODORLESS
QUICK, ECONOMICAL, SAFE AND CONVENIENT.

Gives Hot Water at all Times Without Attention.

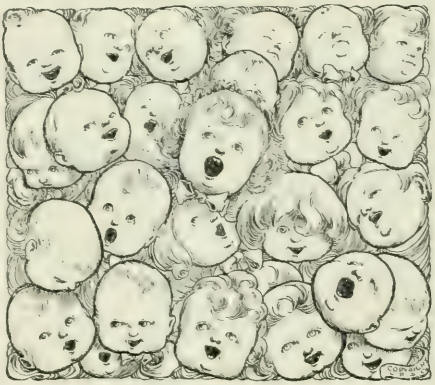
It is an ornament to any apartment and is specified, as a routine practice, for all kinds of service—

$48.00 with thermovalve; $38.00 without.

A. Welch & Son

304 Queen St. W.

Toronto - - - - Canada



Do You Know Just How Good TORONTO City Dairy Certified Milk is?

Every month our model farm, "Dentonia Park" is inspected and its milk tested by the Milk Commission of the Academy of Medicine—they find it good enough to be sold under their own "Certified Milk" seal. It is specially valuable for infants in hot weather.

Price—4 City Dairy tickets per quart, delivered packed in ice.

Telephone your orders to College. 2040

The following suggestions should be followed out by the Mayors and city Councils to prevent typhoid fever:

1. Become informed as to the nature of the infection, its modes of spread and the methods to prevent it.
2. Make disease prevention a conspicuous policy of the administration.
3. Make efficiency the primary basis of appointments to positions in the health office.
4. Provide adequate salaries for health officers.
5. Appropriate funds for sanitary improvements as liberally as the taxation rates will permit.
6. Provide for the collection of mortality and morbidity statistics so that the results of sanitary work may be known.
7. Provide for the proper care of the sick.
8. Keep in close touch with and support the health officer in his work.
9. Co-operate with the authorities of other municipalities.
10. Teach by precept and by examples the precautionary measures.

* * *

The work of sanitation done by the Panama canal commission has excited a great deal of admiration. So great has been the contrast as compared with the pestilential conditions which formerly prevailed that one enthusiast says that if you want to live to a green old age, go to that charming health resort, Panama. The death rate there among the Americans for the past year has been only four in every thousand. A marvelous work has been done on the Isthmus by the sanitary experts since the digging of the canal began. A shipmaster who recently visited Panama says that on the site of his camp, where five of his party of ten died a few years ago of yellow fever he found the other day a village of healthy Americans and saw their children going to school looking as fresh and healthy as the children of San Francisco or New York. When the people of South America learn to do as the sanitary experts have done in Panama, the republics to the south will become among the richest lands of the world.

Reconstructed
Smith Premier
Typewriter

NO. 2 AND NO. 4 MODEL

$45.00 Will do work equal to a new machine and guaranteed for one year. ∴ ∴ ∴ ∴

National Typewriter Company, Limited
78 Victoria Street - Toronto

Made in two sizes 25 and 50 Cents.

Sold by all Druggists.

None other so simple.

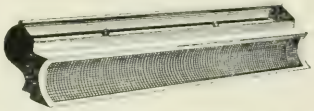
None other so efficient.

It chases Flies.

DE PREE'S
FORMALDEHYDE
FUMIGATOR
(GENERATES FORMALDEHYDE GAS)

HENRY A. ROWLAND
EXCLUSIVE CANADIAN DISTRIBUTOR
Cor. Gerrard and Parliament Sts., TORONTO, CAN.

NATURAL VENTILATION



Patented 1908-1910 Sold by the Inch

WILL FIT ANY WINDOW

HEALTH IS WEALTH

The Universal No-Draught Ventilator

Recommended by Physicians. Lots of Fresh Air and no Draughts. Keeps out rain and dust. Can be used in offices, hotels, schools, etc. Should be used in every sleeping apartment, workshop and factory. Call and inspect or write for further information.

The Universal No-Draught Ventilating Company

30 Adelaide Street - TORONTO, CAN.

March's Thesaurus

Designed to suggest immediately any desired word or phrase needed to express exactly a given idea

By FRANCIS ANDREW MARCH LL.D., L.H.D., D.C.L. Litt.D.

The FOUR Great Cardinal Points of March's Thesaurus

FIRST. It supplies you with the word that memory fails to recall to exactly express an idea.

SECOND. It finds the missing word — the word you do not know — to precisely express any thought that you may have in mind.

THIRD. It extends knowledge and creates new ideas by grouping all related words and their meanings that express thought on any subject.

FOURTH. It gives one absolute and almost immediate command of the entire English language.

NOTHING LIKE IT IN THE WORLD

T. J. FORD & CO'Y

303 CHURCH STREET - TORONTO, CANADA

The amount of dust that a carpet of ordinary thickness can conceal about its person is astounding. In the old days when cleaning was done by brushing and pounding—stirring up the dirt and allowing the wind to bow it into somebody else's windows—no accurate measure of the dirt-holding capacity of household furnishings was possible. The vacuum cleaner has changed all this. Nowadays the dirtiness of things can be determined by meter, in terms of quarts or bushes per yard.

As an illustration of the startling results sometimes obtained by the modern cleaner, from four strips of carpet in the aisles of a small moving-picture theater a wash-tub full of dust was removed by a little one-quarter horse power cleaner. If some Canadian theater carpets can't beat this, appearances are deceptive. As a matter of fact, heavy draperies and thick carpets in places of public meeting are sanitary outrages nowadays.

Dust plays an important part in the spread of disease, and every means should be taken to prevent its accumulation in places where it can be readily stirred into the air and breathed into human lungs. The proper decorative furnishing of a theater is quite as important to the health of its patrons as the character of its plumbing. Our health boards' oversight of the latter might well be extended to the carpets and draperies.

* * *

A model village, within the 5-cent car fare limit built by women and conducted by them, where the poor may, for the same price they now paw for a miserable, unsanitary court dwelling, obtain a concrete home, sunny, clean, sanitary, with a bit of garden where they may grow their vegetables and flowers that is what is to be accomplished by Los Angeles women. The plan includes building the houses with space for gardens. It is believed a sufficient sum could be obtained, not only to pay for the actual maintenance, but to cover the expense of a district nurse, whose business it would be to teach the inmates to adopt modern methods and live in a cleanly, hygienic manner.

Suggestions to practicing physicians for the prevention of typhoid:

1. Become informed as to the efficient methods of prevention at the bedside.
2. Teach by precept and by example precautionary measures at the bedside.
3. Have preventive measures begun immediately in all suspected cases.
4. Advise and have carried out methods of prevention which are practicable.
5. Continue preventive measures as long as the dejecta are infective.
6. Teach the importance of proper disposal of sewage.
7. Give consistent advice in regard to polluted water supplies, milk and food supplies generally.
8. Make the local medical society a school of instruction in the principles of prevention as well as the cure of disease.
9. Co-operate with health officers.
10. Help to create sentiment for proper sanitation and so aid in the procurement of desirable legislation.

* * *

In the Cooke Vacuum system of car ventilation, sixteen openings are placed in a false roof. Air cavities are constructed under the heaters in the floor, while a small motor is installed in the vestibule. The result is that the air comes in from under the car, is heated before it reaches the interior, and, subsequently, passes out through the openings in the false roof.

The motor regulates the ventilation so that the air in a car is said to completely change in from three and a half to five minutes.

WHEN SENDING
MONEY BY MAIL
USE
Dominion Express Co.
MONEY ORDERS
AND
FOREIGN DRAFTS
The safest, cheapest and most convenient method of remitting money to ANY PART OF THE WORLD
If lost, stolen or delayed in the mails, your money will be refunded or a new order issued without further charge.
MONEY TRANSFERRED
BY
TELEGRAPH AND CABLE
TRAVELLER'S CHEQUES ISSUED
AGENCIES THROUGHOUT CANADA

Special

Morning Coat and Vest - $25.00
Frock Coat and Vest - $33.00
GUINEA TROUSERS
$5.25 spot Cash.

R. SCORE & SON, Limited
76 King St. W., Toronto, Ontario
"THE HOUSE THAT QUALITY BUILT"

Henry A. Taylor
Draper
119 West King Street
: : : TORONTO : : :

When communicating with advertisers please mention The Public Health Journal. Applicants for advertising in this Journal show reliability before being allotted space.

Watering vs. Oiling Roads

WATERING the road keeps down the dust so long as the moisture remains, but the constant application of water washes away the valuable binding material, thus destroying the road and making repairs necessary.

OILING the road eliminates the dust, hardens and makes the road practically waterproof, retaining the precious binding material on the road, where it belongs, thus extending the life of the road and cutting out largely the cost of repairs.

WATERING the road means, in any case, that all night long and all day Sunday the disease-laden dust is blown about, causing eye, throat and tubercular troubles, as well as destroying lawns, shrubbery, fruit, furnishings, merchandise, etc.

OILING the road means that there is no dust to blow at any time. The original dust is disinfected by the oil and worked into the road, thus making it wholesome and sanitary to live or travel upon a properly oiled road.

WATERING the road means expending large sums of money without receiving permanent benefit.

OILING the road means that it actually costs 25 per cent. less than watering, according to the experience in Toronto, and every gallon of oil used makes the road permanently better. It is like "having your cake and eating it."

WATERING the road attracts flies and mosquitoes.

OILING the road, with Vulcan Road Oil, drives away all insects and makes life worth living for man and beast.

Why pay immense sums for good roads and then let them go to pieces for lack of oiling? Every road—new or old—should be oiled regularly to keep it in repair. The amount of oil required to be used depends largely upon the condition of the road; where dust is not removed it means more oil, especially at first. The experience on city streets in Toronto after one or two good treatments, is that a mile in length of road by width of sprinkler (14 to 16 feet), takes about 700 gallons, on the average, each application. It is generally applied four to six times a season, but this is largely governed by local conditions. It can be used in an ordinary watering cart or hand sprinkler.

The undernoted can be had only from us:

(1) VULCAN ROAD OIL, sanitary, effective, applied by sprinkling. (2) VULCAN PARKWAYS OIL, special quality, odorless, for sprinkling walks, drives and private roads. (3) VULCAN FLUID ASPHALT, spread on hot once a season only, will eliminate dust and help to make and keep the road solid.

CORRESPONDENCE INVITED.

The BRITISH AMERICAN OIL CO., Limited

REFINERS, TORONTO

Branches: Montreal and Ottawa. **Makers famous "Vulcan" brand Oils and Greases.**

We Make THAT GOOD OIL

CANADIAN JOURNAL OF PUBLIC HEALTH

Vol. 1 no.12
Dec.1910

RA 421 C3 GERSTS

Canadian Pacific Railway

IMPROVED SERVICE

NORTH TORONTO
TO
OTTAWA & MONTREAL

Leave North Parkdale	-	-	9.15 p.m.
Leave West Toronto	-	-	9.30 p.m.
Arrive North Parkdale	-	-	9.40 p.m.
Leave North Toronto	-	-	10.00 p.m.

Daily except Sunday. Will Stop at Westmount.

Arrive Montreal 7.00 a.m. Arrive Ottawa 6.50 p.m.

THROUGH SLEEPERS FOR BOTH POINTS

Passengers may remain in Sleepers until 8.00 a.m.

FROM UNION STATION TO MONTREAL AND OTTAWA

9.02 a.m. Daily. 10.30 p.m Daily.

Through Sleepers for Montreal and Ottawa on night trains.

SMOOTH ROADBED. CONVENIENT STATIONS.
UNEXCELLED EQUIPMENT. ATTENTIVE PORTERS.
THE LOGICAL ROUTE.

THE MODERN CLEANING SYSTEM

The *Keller-Santo* Vacuum Cleaner makes absolute cleanliness possible. Every particle of dust can be removed without 'raising' a particle. So necessary is this sanitary, thorough dust removal that no home can be considered "modern" in its equipment until a vacuum cleaner is put to work.

The *Keller-Santo* is large enough to do thoroughly the cleaning for the largest home, and with a few extra attachments will serve the needs of hospitals, churches and other semi-public buildings.

SOME OF ITS GOOD POINTS. A perfect motor that will not give trouble nor overload your wires: a strict conformity to the limits set by the Insurance Underwriters. It is portable—can be carried as handily as a pail of coal; will last easily 15 or 20 years.

Keller-Santo Vacuum Cleaner equipped to suit your current **$135.00**

THE T. EATON CO LIMITED

TORONTO - CANADA